





# LECTURES OF INTEREST TO WOMEN

# FOR MOTHER'S AND NURSES

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PERFECT HEALTH



# **INTRODUCTION**

''As upon the stainless skies
Peaceful hangs the new born sun;
So, upon thy bosom lies,
Mother pure thy holy one,
Ah, how lovely that repose,
Mother, with the infant fair,
Twined, as with the tender rose,
Modesty, grace and sweetness are.''

#### TO THE WIFE, MOTHER AND NURSE:

We have selected for this book such lectures as will be most practical. We have explained in detail, as briefly as possible, the essential and practical knwoledge in regard to pregnancy and labor, including the after-care; the general care and feeding of the new-born infant during the first year; the general; care of older children, both in health and disease with a summary of each diseases as are common in childhood, together with their nursing and medical treatment.

When possible, we have omitted medical terms and have written the lectures in simple language, so as to make them more clearly understood by the reader. Our aim has been to have the lectures act strictly as a teacher telling how. Therefore, they contain much detail. We have tried to express ourselves in a way that will be of practical benefit. Our chief object has been to give a clear knowledge of those subjects upon which every woman should be thoroughly informed.

All late literature has been consulted, and we wish here to express our hearty thanks to the authors and publishers of the works so used, namely, DeLee, Garrigues, Grandue, Jarman, Marx, Kilmer, Tweedy, Griffith, Crulee, Holt, Williams, Clock, Fischer, Abt, and others. We are greatly indebted to Mrs. Royal A. McClure (a trained nurse), who has made valuable suggestions, and has assisted us in the preparation of our course of lectures on obstetrics for nurses.

The lectures contained in this book have a definite purpose. They will instruct the expectant mother upon matters of vital importance relating to her pregnancy, her confinement, and the care of her child. They will greatly assist the nurse in following out the physician's orders.

We want to impress upon you the necessity for better preparation and better care during pregnancy and childbirth. Many say that it is a natural occurrence and needs little or no attention, but we tell you it is the greatest science in medicine and when you treat the subject indifferently you make a great mistake. Statistics show that in the United States alone, over 20,000 women and children perish each year during confinement. This is largely due to the lack of proper knowledge of such cases both by the laity and the attendants. Why all this care and attention? Let us impress upon you the necessity of maternity homes and hospitals that make a specialty of confinement cases. When possible, every woman should be confined in an institution that specializes in obstetrics. Home is not the ideal place for confinement and it is a great satisfaction to know that the laity have learned to realize this fact.

The third lecture in this course has been written to prepare and care for the patient at home. In many cases circumstances compel the patient to be confined at home, but it is not best for the patient. Your physician can do better work for you in a maternity home, where they have every facility for treating any complication that may arise.

Poorly managed confinement cases mean poor health in after years, and we want to impress upon you the untold suffering which is the result of ignorance relative to pregnancy, confinement, and the after care.

There is a great deal being said and done about better babies. Various organizations are taking up this work and endeavoring to teach mothers about the care of their children. This is all well

#### INTRODUCTION

and good in its place but if we are going to have mothers who are able to nurse and take care of their children we must have first a healthy and well mother, because breast feeding is a most important factor for the development of a healthy child.

Now, how can an infant receive attention, proper nursing and care if the mother is in ill health.

So let us first give the mother the proper care during her pregnancy, her confinement, and the lying-in period and we will lay the true foundation for better and healthier babies.

Therefore, we have endeavored to place before you in simple language in these five lectures such knowledge as deals with the proper care that the young wife, the pregnant woman, and mother, should have. It tells the mother what she should know about the care and feeding of her child. It will assist the nurse in her work, and that the demand for this knowledge is greater today than in the past cannot be questioned.

We trust nothing has been omitted which will give a clear understanding of the "Signs and Symptoms of Pregnancy," "Hygiene of Pregnancy," "Preparation of the Patient and Room for Confinement," "Management of Labor, including the After Care," and "The General Care and Feeding of the New Born Infant During the First Year."

estly and carefully and to regard them not as a reproach upon you, but rather upon the false system of educating wives and mothers that a confinement case is only a joke. There is a great necessity for enlightenment on this subject. Let the young expectant mother be thoroughly familiar with what is required to give her the best care, and when she obtains this knowledge she will eliminate much suffering for herself and secure better attendants (that is, physicians and nurses who have specialized in this branch of the profession) to take her through the ordeal of childbirth. Years of experience as physicians and obstetricians tell

#### LECTURES OF INTEREST TO WOMEN

us how much we need a change from ignorance to knowledge on this subject, and that is why we have prepared and selected these lectures for your study, as it is your right and duty, as a mother, to know and to become better educated along obstetrical lines.

The Lectures in this book should be read thru several times regardless of paragraph, so that you will become familiar with them. The paragraphs are inserted for quick reference to any one part of the Lectures.

Yours very respectfully,

SEATTLE MATERNITY HOSPITAL, Inc.

# PART I

Contains four lectures
relative to pregnancy and the
lying-in period: "Signs
and Symptoms of Pregnancy,"
"Hygiene of Pregnancy,"
"Preparation of the Patient and
Room for Confinement," and
"Management of Labor, Including the After Care."



# THE SIGNS AND SYMPTOMS OF PREGNANCY

To-day let us take for our lesson the "Signs and Symptoms of Pregnancy."

By the term "Signs and Symptoms" of Pregnancy, we mean those conditions which a patient tells us, together with those which we find by examination. The conditions which the patient tells us we call "Symptoms" and those conditions which we discover personally we call "Signs." Symptoms are subjective and signs are objective. We must not rely upon subjective symptoms to make a positive proof of pregnancy, but we must rely largely upon signs or the objective conditions that cause the changes of maternal organism which are brought about by conception, and the order of the appearance and variation of these changes that occur relative to the time of pregnancy gives the valuable information to determine if pregnancy is present.

You as nurses may not be able to use in your practice all the signs given you, but you should be familiar with them because knowledge is power and it will make you a better assistant and a better nurse by having such knowledge.

Now to ascertain with certainty that a woman is pregnant during the early stages requires very careful consideration from every detail regarding the case, and even then it is very difficult to say positively in some cases. As a rule many people in general believe it should be an easy matter to tell if a woman is pregnant, because they are not familiar with the various fallacies that underlie the symptoms of pregnancy. Sometimes the diagnosis of pregnancy can be made very quickly, but one must be warned in regard to ones statements, because the patient will discredit the physician if the event proves him wrong, and the same can be said of

#### LECTURES OF INTEREST TO WOMEN

the nurse. Therefore, much depends upon our decision, so much that an accurate diagnosis is desired as it may involve the fair name of a virtuous woman. Therefore, it requires that the physician should not be reckless in his opinion, as mistakes may be disastrous to both mother and child.

In the first few days of pregnancy there are no absolute signs of pregnancy. Later the positive signs develop; such as the fetal heart tones and movements. Oftentimes in making an examination it is impossible to obtain the proper findings, for instance, the woman may be too fat, a tumor may exist in addition to pregnancy, the abdominal cavity may be filled with fluid, the patient may hold the abdominal wall and perineum so rigid that none of the parts can be definitely outlined. This may be due to a patient being nervous or to tenderness in the abdomen, or it may be practiced with intention to deceive.

Thus a woman may be pregnant and she may wish to conceal it in order to get the attending physician, not knowingly, to produce abortion either with medicine given for amenorrhea, or by passing a sound into the uterus for diagnostic purposes. Or upon the other hand a woman may not be pregnant, yet she may want a positive opinion from the physician, that such is the case, in order to blackmail. Therefore, we cannot accept the statements of a patient as always being true.

For the purpose of studying the Signs and Symptoms of Pregnancy, we will divide the period into three equal parts, namely, the first 3 months, the second 3 months, and the third 3 months.

In the first 3 months we have the first important symptom of pregnancy and that is the cessation of menstruation, yet we must remember that there are three special fallibles which may underlie this symptom.

#### Paragraph 2

MENSTRUATION, as associated with the signs and symptoms of pregnancy:—As a general rule, when a woman who has always been regular, and her men-

#### THE SIGNS AND SYMPTOMS

struation stops, we say she is pregnant, although we have no right to make such a statement without due consideration, on account of the fallacies associated with menstruation relative to pregnancy.

# Paragraph 3

may occur without menstruation, that is, a girl may become pregnant before puberty; (b) that a woman may become pregnant while nursing a child, which at this time under normal conditions, she does not menstruate; (c) menstruation may cease, caused by heart disease, tuberculosis, syphilis, anemia, change of climate and mental influences; also local disease, like atresia (closing of the hymen or the vagina). Menstruation will stop in cases where no cause at all can be given. These cases may become pregnant with no menstruation. Cases are recorded where pregnancy had taken place years after women have passed the change of life (the menopause).

#### Paragraph 4

MENSTRUATION MAY CONTINUE DURING PREGNANCY. It is not rare to have cases where women will menstruate two or three times after conception has taken place. Generally the amount of blood is small and the character of the flow is usually abnormal. Cases are recorded where menstruation occurred during the entire period of pregnancy. It is well to remember when there is any abnormal hemorrhage relative to menstruation to suspect a case of pregnancy has begun to develop. If such a case should come under your observation, advise your patient to consult her physician, as there should be a careful examination made to find out the cause of the irregular flowing or hemorrhage.

#### Paragraph 5

IRREGULAR MENSTRUATION.—Some women are habitually irregular, going several months at a time without menstruating, causing no ill health.

Yet after taking all of these facts into consideration, we are reasonably safe to say, that a woman is pregnant whose menstruation has been normal

#### LECTURES OF INTEREST TO WOMEN

and stopped suddenly, providing, she is in perfect health; also her mental condition is normal, that she is free from worry, and her surroundings have been free from any changes, that is, she has not changed climate.

You see the symptom relative to menstruation is valuable yet it is only presumptive. It is also useful in fixing the day of conception and determining the day of labor.

#### Paragraph 6

MORNING SICKNESS. This is one of the early symptoms of pregnancy, usually occurring at the end of the fourth week. It may show itself earlier or later. Nausea varies in different individuals, some become quite sick and vomit profusely. There are cases where there is no morning sickness, nor is the stomach affected at all during the entire pregnancy. About one-third of the pregnant women have nausea and vomiting as pregnant symptoms, and about one-third complain of it occasionally and gives very little trouble and about one-third are free from it entirely.

Nausea and vomiting occur earlier, more constantly and more severely in the primipara than in the multipara, and women of the high-strung temperament have more than those of the hard working class. It is well to bear in mind that vomiting and nausea exist with the living child. It has been observed with authority that when the child dies in the uterus, the vomiting ceases. There are many other conditions that would produce vomiting similar to pregnancy, such as, acute or chronic appendicitis, tumors in the pelvis, pelvic peritonitis, and various other pathological conditions of the female organs.

#### Paragraph 7

SALIVATION. There is generally a slight increase in the saliva, accompanied with nausea. It may be determined as "cotton spitting," occurring in women who have no pathological conditions or signs of salivation similar to that caused with mercurialization or drugs. This symptom has some value in determining the presence of pregnancy, though it may occur in other uterine conditions

#### THE SIGNS AND SYMPTOMS

and hysteria. In some cases it is very marked and becomes quite profuse. There is also an inflammation of the gums during pregnancy and more or less loosening of the teeth in some cases. The increase of saliva is probably caused by the toxemia conditions that are always present in the pregnant woman.

# Paragraph 8

CHANGES IN DISPOSITION. The change in disposition has been mentioned by some authors, yet the symptom is unreliable, because it can be autosuggested by the patient.

#### Paragraph 9

IRRITABILITY OF THE BLADDER. The position of the pregnant uterus causes a change of position to take place with the bladder resulting in frequent urination. This we notice particularly in the first three months. This disappears after the uterus has enlarged sufficiently to bring it up into the abdominal cavity and occurs again in the last months of pregnancy when the uterus presses upon the bladder.

#### Paragraph 10

THE BREAST. As early as the fourth week there may be tingling and even shooting pains in the breast with some enlargement. The nipples become darker and more sensitive, also more erectile. The dark areola around the nipple becomes puffy as if there was air under the skin. The glands of the Montgomery become enlarged. Fluid may be expressed from the nipples as early as the twelfth week, but it may not be present until after delivery. Of these findings the most important is the change in the color of the areola, being much darker and there exists a puffiness which is very noticeable. These signs are more marked in a primipara than they are in a multipara. These conditions are of great importance when combined with other symptoms, and we must note that nervous women who are not pregnant may have tingling of the breast with an enlargement of Montgomery glands and fluid may be expressed from the nipple. Pelvic disease may produce the same condition. Therefore these conditions occurring other than in pregnancy lowers the value of this sign.

# Paragraph 11

THE BLUISH DISCOLORATION OF THE VULVA AND This discoloration usually is most marked around the meatus and the vestibule, extending up into the interior wall of the vagina. It is of an opaque bluish tint with a tendency to violet. It appears about the end of the second month. It may not occur until the end of the third month, but becomes more marked as pregnancy advances. It is more noticeable in multipara than in primipara and in women who have a catarrhal or any other diseased condition of the genitalia. It is quite marked in cases of contracted pelvis, especially in cases where the patient has had previous hard delivery. This sign is quite frequent, yet it may not appear until very late, and is not constant in all cases. This discoloration is essentially a local venous congestion and should disappear with any condition that would cause hemorrhage. Conditions aside from pregnancy may cause the same discoloration such as: menstruation or rapidly growing pelvic tumors, displacement of the uterus, in fact anything that interferes with the pelvic circulation, which would have a tendency to obliterate. Therefore, this is not a sign of positive value and can only be used in connection with other signs and symptoms...

# Paragraph 12

SOFTENING OF THE CERVIX AND VAGINA. The congestion of the pelvis due to pregnancy is manifested very early by softening of the vagina and the cervix. In primipara this is noticed about the sixth week, or even earlier in the multipara, by an acute observer. The lower part of the cervix softens first. There is also a noted softening of the walls of the vagina, with an increase of the leucorrheal discharge. Some leading obstetricians put much value on this sign and say: "If the cervix feels as hard as the cartilage of the nose, no pregnancy exists; if it feels like the mucous membrane of the lip, pregnancy is possible." We must remember that a chronic inflammation of the cervix will cause it to remain hard and rigid even though pregnancy is present and will soften

#### THE SIGNS AND SYMPTOMS

but very little until the last months of pregnancy. Therefore, this sign also can only be presumptive and associated with the other signs and symptoms.

#### Paragraph 13

HEGAR'S SIGN. This is known as the softening and compressibility of the isthmus uteri and lower uterine segment. You as nurses may not be able to make the necessary examinations to note some of the different signs, but we want you to become familiar with them so you can intelligently assist your physician. On examination the isthmus uteri is compressed between the two fingers in the fornix and the abdominal wall. In typical cases the fingers can be so close together that the uterine tissue between seems to be reduced to a very thin membrane. Of course, in fat women it is more difficult to make this examination. Also this is true when the abdominal muscles are held rigid. these cases one finger in the rectum and the thumb in the vagina often gives good results. In order to get this sign in some cases it is necessary to give the patient an anaesthetic and draw the uterus down with Vulsselum forceps. This sign appears in multipara at the sixth week, but it is seldom fully developed until the tenth week. This disappears when the uterus attains a size and height which make the parts inaccessible.

This is a well marked sign of pregnancy and is highly presumptive and one of the most reliable in the first three months of pregnancy, and it can only be diagnosed by the physician, yet we must remember that other conditions cause this softening. We often find it after an abortion or labor, in congested condition of the uterus, occasionally before menstruation, chronic pelvic inflammation, and displacement of the uterus. Also tumors in the uterine wall, such as fibroids, will produce this condition or rigidity of the parts, therefore, it cannot be ascertained with certainty.

#### Paragraph 14

CHANGES IN FORM, SIZE, CONSISTENCY AND POSITION OF THE UTERUS. Within two weeks after conception, the shape of the uterus begins to

change. The first noticeable change is an increase in the anteroposterior diameter of the body of the uterus. The ovum softens and causes the uterus to enlarge where the ovum is located, which is generally on the side near the entrance of one of the tubes, thus causing one side of the uterus which contains the ovum to become thick and soft, while the other side is small, thin and hard, there being a groove between. These findings are useful in the diagnosis of pregnancy. After the second month one finds the uterus enlarged laterally.

In the third month the body of the uterus assumes nearly a spherical form. The consistency of the whole uterus is spongy, elastic and soft like bread dough, and one notices the organ harden under the examining finger, that is, it contracts. An enlargement of the uterus gives rise to one of the most suspicious signs of pregnancy. A steady increase in size is one of the most valuable signs we have. Three examinations at regular intervals are required and they must be made very carefully and the findings recorded.

# Paragraph 15

FORM. The physician first notices the change in the form of the uterus at the first examination, and then makes comparison in three or four weeks when the second examination is made.

### Paragraph 16

SIZE. At the time of the examination if the tumor corresponds in size to the period of pregnancy, such a diagnosis is always certain, as the normal enlargement of the pregnant uterus does not correspond in growth to any other kind of uterine tumors, so remember the steady increase of the uterus is one of the most valuable signs we have. If two or three careful examinations are made at regular intervals, say three or four weeks apart, and there is an increase in the size of the uterus that corresponds in size to that expected for pregnancy, we can say with certainty, the woman is pregnant. If the uterus should enlarge as it would under normal pregnancy and then become small again, you would suspect an undeveloped ovum.

# THE SIGNS AND SYMPTOMS

#### Paragraph 17

CONSISTENCY. As mentioned the uterus when pregnant becomes spongy, elastic and soft, resembling dough, and is one of the signs that can be used very early in the diagnosis of pregnancy.

# Paragraph 18

POSITION OF THE UTERUS. The strong anteflexion of the uterus, that is, bended forward upon itself, and lying like a lump of dough upon the bladder, serves to draw the attention to a possible diagnosis of pregnancy. This is immediately noticed upon the introduction of the finger into the vagina.

These four signs taken together, and by an experienced examiner, are sufficient to make possible a positive diagnosis of pregnancy.

#### Paragraph 19

GENERAL CONSIDERATIONS. In making the examination to verify the above conditions, the bowels and bladder should be emptied, all tight clothing removed, with the patient lying appropriately draped and at ease on a bed or table, and if you will in this way prepare a patient for a physician to examine, he will follow a definite order that all points may be considered. One must not be satisfied with one or two of the Signs and Symptoms, but they must all be taken collectively. The examination should be made under antiseptic precaution. The examiner should be guarded in making a positive diagnosis during the first three months only under the most favorable circumstances. Better leave the answer in doubt and request the patient to return for a second examination at a time when the positive signs of the second three months are present.

#### Paragraph 20

DIAGNOSIS OF PREGNANCY by examination of the blood by "Aberhalden" promised to be of great value. It depends on the determination of the ferment in the blood of the pregnant woman. Experience teaches in laboratory work, that theo-

#### LECTURES OF INTEREST TO WOMEN

retically it is perfect; but practically the reaction cannot be controlled so it is not a positive sign.

# Paragraph 21

WE ALSO HAVE a chemical examination of the urine, which is claimed by some to be of value in the diagnosis of pregnancy. Take certain urine, when the patient is free from any kidney trouble, and have it examined similar to the Wassermann reaction. It is known as "The Complement Fixation for the Diagnosis of Pregnancy with Urine." What is said of the examination of the blood can also be said of the urine, it is not a positive sign.

In conclusion, to sum up the diagnosis of pregnancy, let us see what are the most positive factors:

# Paragraph 22

#### IN THE FIRST THREE MONTHS:

- 1. Morning sickness.
- 2. Cessation of menstruation.
- 3. Size, form, position and consistency of the uterus.

#### IN THE SECOND THREE MONTHS:

- 1. Foetal heart beats (not constantly present).
  - 2. Size of uterus.
  - 3. Foetal movements (quickening).
- 4. Size of uterus corresponding to the time of pregnancy.

#### IN THE THIRD THREE MONTHS:

- 1. The detection of foetal parts and movements.
- 2. Size of uterus corresponding to the time of pregnancy.

Now if the most positive symptoms and signs are present in connection with all the other signs, and we can exclude all fallacies of each, we can say with certainty, that the woman is pregnant.

# HYGIENE OF PREGNANCY

# Paragraph 23

At this hour, ladies, we will talk about the hygiene of pregnancy, that is, how a pregnant woman should take care of herself, and we will teach you how to give her the proper instructions. Let us say that pregnancy is a natural physiological process, yet it may at any time become pathological. with serious results. There are several reasons why a pregnant woman should have special care, namely: all the nervous system is under a great strain; the heart, liver and kidneys have extra work to do, then there is a metabolic change that takes place between the developing foetus and the mother. not well understood, yet these changes produce poison leading to very serious results. The special point for you to keep in mind is that pregnancy modifies and tests all the systems of the body, and this is why we should pay special attention to the patient's health during the time of her pregnancy.

Women are usually extremely ignorant of all things concerned with pregnancy and their confinement and think they need no medical attention during pregnancy, and how inefficient it is, from a medical standpoint, to have a physician take a patient's name, date of her confinement, and then not see her again until he is summoned to her labor.

Women are gradually learning these facts and consult the doctor as soon as they believe themselves to be pregnant and engage him for their confinement earlier now than formerly; earlier among the wealthier classes, earlier in the city than in the country, earlier in the United States than in most other lands. Many advantages arise from this, in that it may enable the doctor to learn the traits and constitution of his patient, watch for any abnormal condition, and prepare her properly for the labor. This practice should there-

fore be encouraged. You will be asked many questions by pregnant women, and you must be able to give them such instructions and other common information as will be of value to them. So today we will instruct you in regard to the 'Hygiene of Pregnancy.'

#### Paragraph 24

DRESS. Now, let us first consider the dress. The clothing that is worn by a pregnant woman should be simple and warm, even in the summer, woolen underclothing of the lightest weight is to be recommended and heavier should be worn in the winter. This would especially be true if there is any inflammation of the kidneys. All clothing should be hung from the shoulders by suspenders or a corset waist. Heavy skirts should not be worn and supported from the waist. In place of wearing heavy skirts, it is better to wear warm closed underwear, and this keeps the body warm and prevents infection from street dust.

# Paragraph 25

SHOES. Low heels and broad toes are best, as the pregnant woman throws her head and shoulders back, in order to keep her balance. This makes an angle in the small of the back, and gives the patient a peculiar gait, and when the heels are elevated, it throws the body still more forward. Then the woman is compelled to throw the head and shoulders further back. This will cause pain in the loins and stretching of the abdominal muscles.

#### Paragraph 26

CORSETS. There should be no circular constriction of clothing at any part of the body. Corsets, tight waistbands, or elastic garters, should not be worn. In multipara and in most primipara, towards the end of the pregnancy, a light waist and an abdominal support, of proper form, that will lift up the lower abdomen, will give great comfort. There are some very good maternity waists and supports on the market, the best being the 'Patterson Supporter,' the 'Kabo or Ferris Maternity Corset,' and the 'Stork Corset.' We

especially recommend the last two. The ordinary corset is particularly injurious during pregnancy as it forces the child down into the pelvis and against the lower abdominal wall, causing congestion of the pelvis veins and weakness of the abdominal muscles. Too tight lacing of corsets restrains the expansion of the uterus, causing deformities of the child, such as club foot, etc. Women who wish to conceal pregnancy by tight lacing may do themselves and the child an irreparable injury.

# Paragraph 27

DIET. There is no strict rule governing the diet of pregnancy, yet the diet should be simple. The amount of meat should be limited. Not more than four ounces a day should be consumed of meat, meat broths and eggs. Pastry, highly seasoned salads, starches fried in fats, and too much fried foods in general should be avoided. A pregnant woman's diet should consist largely of cereals, vegetables, and fruits, especially fruits, as they will have a tendency to keep the bowels regular. She should drink plenty of water, at least five full glasses daily, and should drink a glass full of water before retiring and one upon rising in the morning. Milk taken with meals is an ideal food for patients who care for it. Buttermilk should be especially recommended. Alcoholic liquors and stimulants of any kind should be avoided for two reasons, because they have a tendency to produce the liquor habit, and at the same time they are injurious to the child. Pregnant women should not eat too much, but as a rule they may eat anything they can digest, but only at meal times. Do not let your patient destroy the natural appetite by eating between meals.

Fat women may restrict liquids, but never so much that the daily amount of urine is reduced below 30 to 40 ounces. It is much better to decrease the general diet if it is necessary.

Coffee and tea, not too strong and in moderate amounts, can be taken with safety when they do not interfere with digestion and there is no constipation.

#### LECTURES OF INTEREST TO WOMEN

# Paragraph 28

BOWELS. Constipation is especially the rule among women and more so during pregnancy. It must not be neglected, as it may lead to the most serious consequences. It is true that a case of chronic constipation cannot be cured during pregnancy, but it is necessary in most of these cases to give more or less drugs, in connection with other treatment, in order to keep the bowels regular. The following treatment will be found very satisfactory and is one you can recommend and use in your work.

# TREATMENT OF CONSTIPATION DURING PREGNANCY.

#### Paragraph 29

THE PATIENT should have a regular time for the bowels to move each day.

The best time is shortly after breakfast. Should no movement occur, it is best to use a glycerine suppository or an enema at this time. A desire for the movement of the bowels at any time must not be resisted. Abdominal massage is not permissible during pregnancy.

#### Paragraph 30

EVERY MORNING, just after rising, and every evening, just before retiring, the patient should drink a glass of cool water and eat some fruit, an apple or an orange, and drink plenty of water between meals.

#### Paragraph 31

THE DIET should contain fruit and vegetables in abundance, especially spinach, peas, beans, barley, tomatoes, corn, and foods of this kind, but we cannot use as much of such foods as in cases where a woman is not pregnant. Tea is forbidden, but coffee in moderate amount is allowed. Prunes, figs and dates are to be eaten, providing they do not cause indigestion, and, if well masticated, this can be avoided to a great extent.

### Paragraph 32

IN SOME CASES it is of value to have the patient every night before retiring, inject into

#### HYGIENE OF PREGNANCY

the rectum, 4 to 6 ounces of ordinary olive oil, leaving it there all night. This is a valuable remedy in cases of spastic constipation. What we mean by spastic constipation is a condition where there is a spasmodic contraction of the muscles of the rectum.

#### Paragraph 33

DRUGS ARE WITHHELD as far as possible, and active cathartics entirely. Cascara Peptonoids, or the bitter extract (2 to 8 grains) given in capsules, gives the best results. ''Phillip's Milk of Magnesia, '' given from 2 to 4 teaspoonfuls, is also good. Both the Cascara and Milk of Magnesia are given at bed time. Begin with the smallest dose and increase gradually until the desired effects are obtained. One may alternate for a week every month or so with a saline apperient, and of the many on the market the best is "Pluto Water." Medicines are discontinued as soon as the patient is taught to do without them. Palatable petroleum or liquid petroleum as it is better known, may also be given to good advantage. A dessert spoonful placed in one-half a wine glass of cold water taken two or three times a day, will assist greatly in keeping the bowels regular. It is often taken once a day in combination with other drugs.

#### Paragraph 34

CULTOL, which is also a petroleum preparation, can likewise be taken with good effects. Care must be used in taking Cultol to have the spoon hot, by dipping it in hot water, and take only a level spoonful, placed well back on the tongue, best taken half hour before meals.

When the line of treatment just given, does not give relief, the case needs special medical attention, and the attending physician should be consulted.

#### Paragraph 35

KIDNEYS. The action of the kidneys during pregnancy is very important. When there occurs in the urine certain abnormal elements, we know that

dangerous conditions are developing, which occurs as eclampsia or toxemia. (These conditions will be taken up in detail at some future lecture.) Now, let us impress upon you how necessary it is to make frequent examinations of the urine during pregnancy. The urine should be examined every four weeks until the seventh month. During the seventh and eighth months, the urine should be examined every two weeks and every week during the last month, and if at any time, there is any suspicion of eclampsia or toxemia, it should be examined every day. The patient should be instructed to send 4 ounces of the morning urine at regular intervals to be examined as directed by her physician or nurse. Once a month, the amount of urine passed in 24 hours should be collected in a suitable container and measured. It must not be less than 50 ounces. A good plan each time the urine is to be examined is to examine the 24 hour specimen, as it is necessary to measure it, the pregnant woman sends 4 ounces of the 24 ounce specimen for examination. Tests are made for albumen, sugar, specific gravity, urea and the reaction. For practical purposes, finer examinations are not necessary. The presence of albumen tells us that we have serious complications to deal with, which will be explained to you later in the course, as well as in your lectures on urinalysis when this will be taken up in detail. We have made these urinalysis for years and have been rewarded by discovering and forestalling many cases of probable eclampsia or toxemia.

# Paragraph 36

BLOOD PRESSURE. The blood pressure in obstetrical cases is very important, as much so as the examination of the urine, because toxemia of the kidneys can be determined by this method fully six weeks before the presence of albumen is found in the urine.

#### Paragraph 37

HIGH PRESSURE in pregnancy tells us that toxemia is present and we may expect eclampsia, as there is absolutely no rise, caused by the

# HYGIENE OF PREGNANCY

pregnant condition itself, and any increase should be regarded as highly suspicious and thoroughly investigated.

#### Paragraph 38

IT IS CONSIDERED highly dangerous to carry a patient through the 280th day with a pressure over 145 because eclampsia is almost sure to occur. In normal cases of pregnancy, it will run low and even throughout the 280 days.

#### Paragraph 39

YOU MAY ALSO REMEMBER that labor pains cause a rapid rise in blood pressure. It falls between pains, rises again with the next pain, and so on until delivery. After the confinement, it will remain a trifle above normal for three or four days; after that it resumes its normal condition.

#### Paragraph 40

THE INSTRUMENT USED to take blood pressure is called the "Sphygmomanometer." The "Tycos" type is the best. You will be instructed how to take blood pressure in your clinical work, and the instrument will be explained to you. The use of this instrument in obsteterics cannot be too strongly emphasized, as we can at all times tell exactly our patient's condition, and the condition of the kidneys, and we can always tell exactly whether our patient is improving or not. Therefore, it is perfectly obvious that by its use the dangers of eclampsia are minimized.

#### Paragraph 41

EXERCISE. Violent exercise during pregnancy is to be avoided. We cannot build up a strong muscular system during pregnancy. This should have been accomplished before. Pregnant women should be instructed to use great caution not to receive sudden jolts. They should be warned against running, sudden motion, lifting great weights, going up and down stairs quickly, horseback riding, motoring over rough roads, golf, tennis, dancing, and swimming. They should take exercise by walks up to two miles daily in the sunlight, and the general housework is desirable,

unless too strenuous. Travel, such as railway and ocean voyages, is not to be recommended. Patients differ. Some women can stand a great deal of exercise and do most remarkable things and suffer nothing, while in others this would bring on miscarriages and they would suffer from the slightest provocation. It is always well to be on the safe side and limit the amount of strenuous exercise.

#### Paragraph 42

A GENERAL MASSAGE is to be recommended and is often useful, but the breast, abdomen and varicose veins must be avoided. None of these parts should be irritated in any way by manipulation or massage. Theatre going is to be recommended, but this should be in moderation, as crowds are to be avoided as much as possible.

#### Paragraph 43

COITUS DURING PREGNANCY. This is a subject of great importance, on which much has been written, and which has been fully discussed by different authors. The weight of opinion is that it should be forbidden during gestation, especially the first three months and the last three months. because the three first months it has a tendency to produce abortion and the last three months infection. Coitus during pregnancy also, in a great many cases, causes a nervous shock to women whose nerves are already overtaxed. It increases the leucorrhea and often increases the nausea and vomiting. Some pregnant women look upon intercourse at this time with disgust, while in others the desire is increased, but upon the whole it is detrimental and should not be practiced.

#### Paragraph 44

BATHING. Very cold and very hot baths, hot sitz baths and ocean bathing are to be avoided, as they have a tendency to cause uterine contraction. Warm daily baths, as well as cool sponge baths are to be taken freely, as they aid the kidneys in the work of excretion and preserve the person from odor and act as a general stimulant and keep the skin in good condition. Bathing of any kind,

#### HYGIENE OF PREGNANCY

which causes the patient to feel exhausted afterward, should be avoided. A general massage after bathing is very grateful to the patient, but the breast, abdomen and varicose veins must be avoided, as they should receive no irritation in the way of manipulation. For the profuse sweating, which is sometimes annoying, and for a general stimulant to the skin, a brisk rub with a "salt towel' is useful. A salt towel is made by wringing a bath-towel out of a strong brine made with common table salt and drying it. It must be remembered that a full tub bath during or near labor is not to be recommended on account of infection gaining entrance into the vagina, therefore, it is better during the last 6 or 8 weeks of pregnancy to employ the shower bath. In this connection we will mention vaginal douches, and, unless they are indicated by some disease and prescribed by a physician, they should not be used as a general routine, and if used occasionally, only mild antiseptics should be employed. The water should not be too hot and should be given under low pressure that is, don't have the fountain syringe elevated above the patient over 2 feet. Five grains of potassium permanganate to the quart of water is a good antiseptic to use. You can have the druggist put up 5 grain powders of potassium permanganate for such use. If the hands become stained with permanganate, peroxide of hydrogen will remove it. Such a douche is only used to keep the parts clean.

# Paragraph 45

MENTAL OCCUPATIONS. Most women have enough to do to look after their house hold duties and their general health without taking up any mental or intellectual studies with the view that the child will be made intellectual, and it is best to discourage the reading of such medical books that describe the anatomy and physiology of the female pelvic organs. This should be accomplished before pregnancy. Possibly the study of music and the various arts, but not to excess, will do her no harm, but rather keep the mind away from self.

Now, this brings us to a subject that we hear a great deal of talk about and one that may interest you greatly.

# Paragraph 46

MATERNAL IMPRESSIONS. By this term is meant those impressions on the mind or body of the child in the uterus which result from a similar impression on the mind or body of the mother. The belief that if a pregnant woman should see an ugly or terrifying object, it would be reproduced in the offspring, dates from remotest antiquity, and is spread all over the world, even in darkest Africa. This idea exists among the civilized and uncivilized and even some medical men are quoted in its support. Nevertheless, most of the late writers call it absurd and harmful. Blondel, of London, fought against the theory. We cannot always prove our medical belief by physical laws and we must admit the influence of heredity which we cannot as yet explain. The argument against the theory of maternal impressions are:

#### Paragraph 47

FIRST. There is no nervous connection between the mother and the foetus.

SECOND. The child is completely formed at the end of the sixth week, a time that pregnancy is usually not recognized, and we find in studying literature along this line that most of the cases reported the mental shock as occurring much later during pregnancy.

THIRD. All the monstrosities observed in the human are found in the lower animals, and in a much greater number. Many, many times immediately after the child is born the mother will anxiously ask you if the baby is ''marked'' but her fears are seldom realized. She had seen something during pregnancy that she felt sure would mark the child, but this did not occur. The weight of authority is in favor, according to our best scientific knowledge, of the belief that the effect of the mother's mind on the physical well-being of the child is absolutely unfounded.

# HYGIENE OF PREGNANCY

# Paragraph 48

IT MUST BE REMEMBERED, however, that a violent emotion causes extreme nervousness to nursing mothers, and can so affect the milk that the child gets sick from it, and even has convulsions in some cases. This is a fact attested by honest observers. Great mental excitement can produce abortion, and let us mention at this time the fact that worry will stop menstruation extending over a period of from one to four or five months. These facts show that an impression upon the mother's mind is transmitted to the uterus, but they do not explain how the destructive action on the foetus is produced. We know that physical, mental and temperamental traits in either parent are transmitted to the offspring. How the germ becomes affected so that it can carry these delicate but permanent impressions, is a question. Perhaps modern science will explain it, but we are not thoroughly familiar with it at the present time.

# Paragraph 49

JUST REMEMBER that in many cases of supposed maternal impression, where there is a plausible connection between the nervous shock and the deformity of the child, there is not the slightest ground for believing that such a teratogenic (monster) connection would exist. Therefore, it is difficult to discover any relation between the mind of the mother and the child that could not be explained by the laws of heredity, as we understand them at the present time. We do not wish to go on record as saying positively that there is no such influence between the mother and the child, but personally we do not believe in it and when the question is asked "Could anything I have done or seen affect my baby?'', the nurse and the physician can conscientiously answer, "In the present state of our scientific knowledge, there is no basis for such fears."

#### Paragraph 50

CARE OF THE NIPPLE AND BREAST. The breast requires more or less care during the entire life

of the individual. The number of women able but unwilling to nurse is small and growing smaller each year. The number of women unable to nurse their babies is enormous, and the evil effects are noticeable in our infant mortality tables. It is a great misfortune if a woman cannot nurse her infant if only for a short time. The care of the breast should begin early in life and the prevention of inflammation of the breast while nursing a child will be more fully discussed under the "Care of the Mother after Confinement." In growing girls, the breasts and nipples need care, and when they develop at puberty, provision for this growth by proper dress should be made. Pressure or injury must be avoided, so you see it is important that the breast should receive a certain amount of attention from birth.

#### Paragraph 51

SOME WOMEN, during pregnancy, require some form of bust supporter to hold up the large heavy breasts. During her bath a pregnant woman should exercise care not to hurt the glands. The fine, branny scales which accumulate on the nipple, if allowed to remain, form crusts, which leads to the formation of cracks in the skin. This will cause infection of the nipple during nursing. The nipples should be washed once or twice a week when taking a bath, with liquid green soap and water. They should then be dried and sterile cocoa butter should be applied. This removes the fine scales which accumulate on the nipples and keeps the skin soft and pliable.

#### Paragraph 52

WITH BLONDES and red-haired women, and others with tender nipples, after they have been washed with green soap as directed, a lotion which is highly astringent like the Tannate of Glycerine, as prescribed by the attending physician, should be used once or twice a week during the last six or eight weeks of pregnancy.

After this astringent lotion has dried in, the nipples are to be anointed with the sterile cocoa butter. No strong astringent washes, like

## HYGIENE OF PREGNANCY

pure alcohol, need be used, as they harden the nipples, which will cause them to crack under the efforts of the child nursing. Remember, the object is to keep the skin of the nipples soft and pliable, and if the nipples are given the care as outlined, you will have very little, if any, trouble.

# Paragraph 53

INVERTED NIPPLES from birth can seldom be improved from treatment. If in any case where there is much deformity of the nipples, or if the nipples are undeveloped and pressed in by improper dress, an attempt may be made, during the last six weeks of of pregnancy, to draw them out with the fingers by giving daily treatment.

# Paragraph 54

PRESERVATION OF THE FIGURE. It is only natural and proper that women are anxious that pregnancy and child bearing should not leave the person in an ungainly shape. The most common complaint is that the patient develops a high stomach after labor, yet it is a fact that the necessary changes that take place during pregnancy have a tendency to beautify the figure, although some women do not look at it in this light, yet it causes a rounding of the hips and a broadness of the bust and a more matured appearance, all of which have a tendency to give a woman a more beautiful figure.

# Paragraph 55

FOR THE PREVENTION of high stomachs or extreme prominence of the lower abdomen, much may be done. Stretching of the abdominal walls and uterus has a tendency to cause a weakened and relaxed condition of the abdominal muscles. To prevent this, the ordinary corset, as we have mentioned, should not be worn during pregnancy. It adds to the strain on the lower abdomen, and thus favors muscular weakness. High-heeled shoes are another factor that causes strain on the abdominal muscles, overstraining during labor, and allowing gas to form in the bowels after labor, are also causes.

# LECTURES OF INTEREST TO WOMEN

# Paragraph 56

TO PREVENT muscular insufficiency, one must begin with the little girl. She should develop herself as the boy does, with sports, such as swimming, climbing, dancing, etc.

# Paragraph 57

WHEN A YOUNG WOMAN, she should not lace and paralyze the abdominal muscles. Healthy exercise with the whole body should form a part of a girl's and young woman's daily routine.

# Paragraph 58

THE ABDOMEN may need some support during the last three months of pregnancy, and this may be obtained by one of the maternity corsets recommended. This support is especially needed in multipara with already weakened walls, with twins, and when the patient has an extremely large stomach.

# Paragraph 59

AFTER THE BIRTH of the child it is your duty as a nurse to see that the bowels are regularly emptied and that gas does not accumulate in the intestines. The binder does not prevent high stomach, yet it will help and the best benefit is obtained from it when the patient first leaves the bed. To assist in bringing the abdominal wall back to its original size the nurse should, after the uterus has sunk into the pelvis, give the abdominal muscles a daily five-minute massage. This will help to tone up the muscles, cause them to contract, which will reduce the size of the abdomen, but massaging at this time will not prevent the formation of the lines noticed on the skin due to pregnancy caused by such stretching. The skin may be massaged gently with olive oil during pregnancy. It may help some to prevent such lines. Several remedies are advertised to prevent this, but you will find them of little or no value.

#### Paragraph 60

MINOR DISTURBANCES OF PREGNANCY. It might be well, in connection with the hygiene of pregnancy, to add a few of the common disturbances that occur during pregnancy. You, as nurses, as well as we

## HYGIENE OF PREGNANCY

physicians, are consulted about certain conditions that develop during pregnancy, and it is wise to instruct the pregnant woman to report such conditions to her physician, since he may detect in them the beginning of serious illness. Other conditions aside from these have been, or will be, mentioned throughout the course, but these minor conditions are so closely associated with the hygiene of pregnancy that we will consider them at this time.

# Paragraph 61

MORNING SICKNESS: Morning sickness is very common in pregnant women between the first and the fourth months. The sickness occurs generally as soon as the patient gets out of bed in the morning, but it may occur at any time during the day and sometimes only in the evening. It can often be relieved by giving her a meal of tea and toast before rising. Special attention should be given to the patient's bowels and she should drink water freely. If a light meal before rising does not quiet the trouble, she should be instructed to take a light diet and eat nothing in the morning until she gets up, and has her regular spell of vomiting. After this she can generally retain food.

## Paragraph 62

SHOULD IT BE REQUIRED to quiet the stomach, such drugs as Ingluvian, Subgalate of Bismuth, Sodium Bicarbonate in proper preparations, as prescribed by the physician, are of value. Such a powder should be given upon waking in the morning and another just before taking the morning meal in bed. Then the powders may be taken anytime during the day when the sickness occurs, as often as every 2 or 3 hours, if necessary. Another good combination is Bicarbonate of Soda, aromatic spirits of ammonia, and the infusion of gentian. This can be given three times a day, half hour before meals in amounts as ordered by the physician.

# Paragraph 63

NOW, there has been a great many treatments and prescriptions given for morning sickness of pregnancy, but they will all fail in aggravated

cases, and when the sickness becomes troublesome a physician should be consulted, as it may be a case that requires especial attention, as one of the serious complications of this condition occurring in pregnancy is uncontrollable vomiting.

# Paragraph 64

INSOMNIA is rare, and is usually due to digestive disturbances and nervous conditions. The same may be said of constant dreaming. If regulation of the diet and bowels does not suffice, simple remedies often will. For example, one or two glasses of hot malted milk just before bedtime, a hot water bag placed at the feet, sleeping alone with a super-abundance of fresh air, warm baths, or an electric vibrator at the back of the neck. Some cases may require medical attention and the physician generally prescribes a dose of sodium bromide -10 to 15 grains, or veronal-5 to 10 grains, at bedtime for a few times, but never gives morphine. Wakefulness is a frequent symptom of early pregnancy and requires no treatment. Late in gestation, it is always to be regarded with suspicion, as it may indicate the beginning of eclampsia. Mental dullness may mean the same.

#### Paragraph 65

NUMBNESS AND TINGLING of the hands and feet, usually combined with slight puffiness, not real odema, are the evidences of mild neuritis, perhaps toxic in origin. Occasionally local tenderness of the corresponding nerves is discovered. While the symptom rarely has any disturbing sequels, it should be watched. Treatment is on the theory that it is due to toxemia. Neuralgia also occurs in some cases. Pregnant women often complain of cramps in the muscles of the arms and legs, yet real tetany seldom appears.

# Paragraph 66

TOOTHACHE: When there are any decayed teeth present in the beginning of pregnancy, you will advise your patient to go to the dentist at once and have them thoroughly attended to, as later in pregnancy she is likely to have more or less neuralgia,

# HYGIENE OF PREGNANCY

and the decayed teeth are bad for the stomach. When decayed teeth develop late in pregnancy, unless the pain is very severe, palliative methods are to be used.

# Paragraph 67

SORE GUMS: If the gums annoy the patient and become sore, and there is an increase of saliva, a tooth brush should be used freely with some astringent mouth wash, as alum—10 grains to the ounce of water—or a 50% solution of peroxide of hydrogen. There is a powder called Pyorrhocide, put up in a tin container, and retails for a dollar. This is very good in such cases.

# Paragraph 68

PAINS IN THE ABDOMEN are frequently complained of by pregnant women. If the pains occur during the early months of pregnancy, a careful examination should be made by a physician in order to exclude tubal pregnancy. Pain is the symptom of many conditions, such as appendicitis, inflammation of the uterus, stones in the kidneys, adhesions, and so on. Intercostal neuralgia is rare, the pain in the lower ribs from which so many women suffer is mostly due to dragging on the thoracic cage by the recti muscles, which carry the weight of the large uterus. For this, the abdominal supporter is indicated. Rheumatic pains also occur and relief may be obtained from the use of a liniment, or you can use Huxley's cream or Rheume Olum, both of which are very good ointments to relieve the pain.

## Paragraph 69

STRETCHING OF THE SKIN sometimes causes pain. Relief may be obtained from lubricants, such as solid albolene, cocoa butter, or rose water ointment.

# Paragraph 70

FAINTING SPELLS: Dizziness, and attacks of weakness demand a thorough examination by the attending physician, to see if there is any heart or lung trouble. Sometimes it is caused by a highly nitrogenous diet and relief is obtained through dietary measures. Iron and phosphorus tonic is often

useful. A preparation known as 'Phosphagon', made by the Arlington Chemical Company, is an excellent tonic for such cases, the dose 1 to 4 teaspoonfuls three times a day after meals. Fresh air is essential. Palpitation of the heart is relieved by a cold drink, but if fainting is frequently repeated medical care is imperative. When dyspnea (that is, difficult breathing) occurs it is often due to indigestion, wrong dressing and the dragging down of the pregnant uterus.

# Paragraph 71

FREQUENT URINATION is usually due, in the early months of pregnancy, to a slight catarrh at the base of the bladder. When women complain of urinary troubles, a careful examination and urinalysis are to be made at once. It is natural for women to urinate very frequently during the first three months and the last three months of pregnancy.

## Paragraph 72

HEART BURN: A great many patients complain of heart burn, with more or less gas and indigestion. You must look to the general hygiene of the patient, the regulation of the diet, and some gastric tonic will often give relief. A capsule that contains 5 grains of Abbott's intestinal antiseptic and 5 grains of peptensyme may be given after meals, as it is effective in controlling the gas and indigestion. In connection with the above, patients can take one or two tablets of carmenzyme any time during the day that there is a distressed condition of the stomach with formation of gas. The carmenzyme tablets should be chewed up before swallowing and they should be taken half hour after eating with a few sips of water in order to obtain best results.

#### Paragraph 73

SKIN ERUPTIONS: Acne, mostly facial, may prove rebellious under treatment during pregnancy. It generally disappears after labor. Wash the parts with tincture of green soap and water, then apply alcohol and open the pustules with a fine lancet and apply hot applications of saturated solution of Epsom Salts, which will give as good results as anything you can do.

# HYGIENE OF PREGNANCY

# Paragraph 74

ITCHING OF THE SKIN: Such conditions as profuse leucorrhea, or vaginal discharge, will cause an intense itching in the vulvular regions. For this trouble, a lead lotion will give some relief.

Put ½ ounce of the liquor plumbi subacetatis fort, to the pint of water and instruct your patient to wash the parts night and morning with a weak solution of green soap and water, and afterwards bathe the parts freely with the lead lotion.

Resinol ointment may be used in place of the lotion, if the irritation is almost unbearable, as it is in some cases.

Any ointment that contains menthol, or tar, is good, as the ointment protects the parts from moisture and stops the itching. It will be more satisfactory in such cases to consult the physician and let him prescribe.

# Paragraph 75

DOUCHES should not be given unless advised by the physician, and that would be only in cases where the itching could not be controlled by the above treatment. If a douche is resorted to, it is best to give it in the bath tub and the fountain syringe should be placed only two or three feet above the patient's hips, using no douche point, but simply the plain rubber tube. A good solution to use would be one dram of borax to every quart of water used. A good douche powder for such cases is Abbott's Vaginal Antiseptic Powder. Use one or two teaspoonfuls to the quart of water.

#### Paragraph 76

A SITZ BATH is also recommended. The use of ichthyol or tar soap has a soothing effect. When the discharge and the itching has ceased, stop all treatment.

## Paragraph 77

FOR THE ECZEMA that may exist on the genitalia and under the woman's breast, it should be washed frequently with tar soap and water followed by very careful drying and then use a dusting powder of zinc stearate.

# Paragraph 78

SWELLING OF HANDS AND FEET: The swelling of the hands and feet should always command attention, because while in many instances it is due to stasis, the swelling disappears when the woman lies down, yet most cases are due to a toxaemia or a kidney condition, and need medical aid and should be reported to the physician. Especially is this true when swelling of the hands and feet are associated with swelling of the eyelids.

# Paragraph 79

VARICOSE VEINS of the legs often occur, especially in multipara, and generally cause more or less pain. The treatment is rest, properly applied bandage, and keep the legs elevated. The best bandage to use is the cloth woven elastic bandage, known as the Crepe Bandage. It should be applied from below, starting at the ankle. Put it on in the morning, or after the patient has remained in bed, with the legs elevated, and the swelling is reduced. This bandage should be removed at night.

## Paragraph 80

SILK ELASTIC BANDAGE is also of great value, and is very effective in a great many cases. It can be secured from the druggist or from the firms that make a specialty in artificial limbs and trusses, which should also be removed at night.

In some cases the veins are so distended that they will rupture, and in order to stop a severe hemorrhage, if such should occur, place a pad made out of a handkerchief directly over the vein, and apply the bandage sufficiently tight, thus controlling the hemorrage until medical aid can be secured.

## Paragraph 81

LENGTH OF PREGNANCY. We cannot be positive, nor give any fixed rule that will tell exactly the date of confinement. This is true even if we know the exact date that conception took place, because labor often occurs as the result of some trauma, fright or any other disturbance. If we reckon our

## HYGIENE OF PREGNANCY

date from cessation of menstruation, it is absolutely unreliable because women do menstruate during the first months of pregnancy, and conception may occur during a period of amenorrhea, that is, in cases where we have no menstruation.

If we figure from the time conception takes place, when this data can be obtained, and reckon from that date, the average pregnancy will be 270 days.

# Paragraph 82

FROM TIME IMMEMORIAL, women have reckoned two hundred and eighty days, ten lunar months, or nine calendar months, counting from the first day of the last period as the length of normal gestation, and for practical purposes this may be accepted, because in the majority of cases it holds good, but one must remember that some children require more time in the uterus for full development than others, depending upon the maternal conditions, because you know some seed in favorable soil grows faster than others, and so it is with the infant.

## Paragraph 83

A GOOD RULE and one as reliable as any to reckon the date of confinement is to take the date when the last menstruation began, count back three months and add seven days. Thus, if a woman's last menstruation began January 1st, that is, before pregnancy took place, count back to October 1st and add seven days, which will make her date of confinement October 7th. Labor may occur a few days before or after this date, but it can be relied upon as being as nearly correct as any other, and the one we wish you to remember and use in your practice. You will find in first pregnancy it will be more correct than in multipara. In the later cases it will generally be a few days later.

# Paragraph 84

THE LENGTH OF PREGNANCY is often reckoned from the time of quickening. By the term quickening we mean the first time the mother feels the movements of the child in the uterus. It usually occurs from the 15th to the 20th week, generally the 18th

#### LECTURES OF INTEREST TO WOMEN

week. Now from the date of quickening add five calendar months. For example, if quickening occurred on June 4th, labor may be expected about November 4.

# Paragraph 85

In fixing the date of confinement, it is well to note the height of the uterus. At the end of the ninth month it is up to, or almost up to, the ensiform cartilage, and at the end of the tenth lunar month (owing to the downward descent of the uterus) it is again half-way between the ensiform cartilage and umbilicus.

# Paragraph 86

The following table for calculating the date of confinement, as compiled by Dr. Ely, is fairly correct and convenient, and is used by a great many.

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Paragraph 87

EXPLANATION: Find in top line the date that the last menstruation began; the figure below will give the date when confinement may be expected, that is, if date of menstruation is March loth, confinement may be expected on December 15th, or one day earlier if leap year.

# HYGIENE OF PREGNANCY

# Paragraph 88

'MISSED LABOR' is a term used where pains begin on the date when expected, but cease, and normal labor does not occur for several days later. In rare cases, the child dies and is carried in the uterus a greater or shorter time. A dead ovum carried in the uterus is not pregnancy. When the pregnant woman ceases to feel any motion of the child she should notify her physician.

#### Paragraph 89

THE AGE of the woman and the sex of the child influence the length of gestation. Statistics show that young women are likely to have a shorter gestation than older ones. Again, women who have been sterile for years and old primiparas are likely to go over term. Women who began to menstruate late, say at 16 or 17 years of age and have painful menstruation and long, hard rigid cervixes, are likely to have delayed labor. Young primiparas often fall into labor a few days before the date set, the tense abdominal wall forcing the head into the pelvis against the cervix, which causes the pains to begin. In the same individuals the second child would undoubtedly be carried longer. As to the sex of the child, males are said to be carried in the uterus longer than females. Women who are active in the last months of pregnancy are less likely to go over term than the idle woman who takes no exercise. In summer, women are likely to give birth earlier than in winter, and then again heredity seems to play a role; thus if a mother has children at the seventh month, her daughter would have children at the same time, or if the mother's labors were prolonged the same conditions would exist in her children.

## Paragraph 90

NOTE: The earliest authentic pregnancy is reported by Bodd. He gives the girl as being 8 years and ten months old and she gave birth to a child weighing about seven pounds. Pregnancy in girls of 12 to 15 years is not rare, and experience shows that most of the children live and that labor is not very difficult. In these cases, the child is usually

# LECTURES OF INTEREST TO WOMEN

small, with a soft head, which accounts for the unexpected safety of the labors. The latest pregnancy on record that we know of is reported by Kennedy. The woman was 62 years old and this was her twenty-second labor. Cases are reported where women have been delivered at the age of 52 years, and in these cases you must remember that menstruation had been absent for years.



# PREPARATION OF THE PATIENT AND ROOM

# Paragraph 91

IF ANY ONE of these talks is more important than the other, it seems that this one should be considered the most important of all—the preparation for the aseptic conduct of labor. Thousands of mothers and children die every year because of the lack of such preparations. The principles of asepsis and antisepsis are not complicated nor difficult to apply, and there are two great principles that we want you to always remember.

First: Everything that comes in contact with the puerperal wounds must be absolutely sterile.

Second: The external genitalia and introitus vagina must be rendered thoroughly aseptic.

## Paragraph 92

THE IDEAL and complete system of asepsis, as you will learn in your hospital practice in this insituation, is not possible in the private home, but unless your patient goes to a maternity hospital for the delivery the same preparations must be made at home for a confinement case as for a major surgical operation, and you must learn how to make these preparations. Do not be content, nor consider that ideal asepsis has been carefully carried out. by simply having a basin of bichloride solution and a roll of absorbent cotton. No doubt some of these terms just used sound like Greek to you, but we are going to take time to explain and analyze them in detail so that you will thoroughly understand what we have just said to you.

# Paragraph 93

ASEPSIS means absence of septic matter. When we say your hands are aseptic, we mean they are free from infection and incapable of contaminating others with the causes of putrefaction.

ANTISEPSIS means preventing or counteracting putrefaction.

# Paragraph 94

STERILE means absence of bacteria, that is to say, we destroy bacteria by sterilization. This is accomplished by heat or by the use of various solutions that render the parts sterile. We use heat at a high temperature, as will be explained to you when you are taught to operate the sterilizer. You will not have the advantage of the sterilizer in homes, therefore we must resort to other methods of boiling or baking our dressings in the oven of a common cook stove. When we boil instruments, towels, sponges, and various other articles, they are rendered sterile. When we apply proper solutions to the skin we render it sterile, and we treat the hands in a way that renders them sterile. We can also sterilize any part of the body upon which we wish to operate. When anything is sterile we render it aseptic, and it is free from all septic matter. When we say that a nurse is sterile, we mean that she has prepared her hands properly and clothed herself with a sterile gown. She is aseptic because she is free from all septic matter and cannot infect her patient, and she does her work in an antiseptic way, because she is preventing infection.

#### Paragraph 95

NOW, ASEPSIS, antisepsis and sterilization are three great words. Write these words, as we have given them to you, on your cuffs, if you will, in your notebook, write them with their definitions in big letters on a card, hang them in your room somewhere where you can see them several times a day and thoroughly master them. Read all the literature you can find on these three great subjects.

## Paragraph 96

NOW, what does all this infection mean? It means that if your hands, or anything that comes in contact with your patient, are not sterile you will infect her; that is, you would be the carrier of germs that would cause the infection, and if you infect your patient she will have puerperal fever,

or childbed fever, as it is commonly known. This will be fully taken up in detail in your lecture on puerperal fever, but let us say this, that whenever infection occurs, one, or all, of three persons are at fault: the doctor, the nurse or the patient. So let us learn in the beginning how important it is that we, as physicians and nurses, do not infect any of our patients. If we should in our practice have a case of infection, be sure that the fault has been with the patient and not from the nurse or the physician. Therefore, let us learn at this time how to sterilize the hands, dressings and the patient, so as to prevent infection.

#### Paragraph 97

TO STERILIZE the hands you should wash them with soap and water at least ten or fifteen minutes (liquid green soap is best), using a hand brush and scrubbing the ends of the fingers thoroughly, as well as the hands and arms. Carefully remove all the dirt under the nails with an orange wood stick. It is a good idea to keep the nails fairly short. Wash your hands thoroughly in this way as well as the arms up to the elbows, using running water from the hydrant. If you use a washbowl, or basin, as you find in some homes, change the water often. After thoroughly scrubbing the hands and arms as directed you will next immerse them into a bichloride solution, 1-3000, or wash them thoroughly with the same—then treat them the same with the lysol solution, about 1-400. Have someone pour alcohol over your hands, or have the alcohol in a basin, then take a sterile sponge and saturate with alcohol and sponge the hands and arms.

#### Paragraph 98

Remember the routine:

First—Wash the hands with liquid green soap and water for ten or fifteen minutes;

Second—Immerse or wash in bichloride solution 1-3000;

Third—Use the Lysol solution 1-400 the same as the bichloride;

Fourth, and last—Use the alcohol.

At no time in the preparation of the hands is it necessary to dry them with a towel unless after using the alcohol you wish to put on dry sterile gloves, then be sure the towel is sterile; it is best to let the alcohol dry on the hands, rather than use a towel. Now, with this preparation we say that your hands are sterile, or in other words, they are clean. They cannot carry any infection, and if you do not handle unsterilized dressings, or articles, you cannot infect your patient.

# Paragraph 99

IT MIGHT BE WELL to mention here that when you first arrive at your case you should wash the hands and use the bichloride as directed. That is the first thing to do, and it will render your hands sufficiently sterile to prepare your patient. It may be necessary to wash the hands occasionally and use the bichloride during the preparation, especially this should be done when you are ready to wash the parts and render the genitalia aseptic, but any time during confinement that you wish to render the hands sterile follow out the instructions we have given you, using soap and water, bichloride, lysol and alcohol. In some maternity homes and hospitals as well as in private practice, the bichloride solution and alcohol are omitted, but we advise the use of these in the homes as well as in maternity homes and hospitals. If you will follow the simple rules as we will teach you for securing asepsis of your hands, the lying-in woman and her surroundings in general, you will approximate the same aseptic conditions which are secured today in our best maternity hospitals.

## Paragraph 100

AS AN EXTRA PRECAUTION, after sterilizing the hands we wear surgical rubber gloves, sterilized either by the dry or wet method; that is, they are sterilized dry in the sterilizer or they are boiled in a vessel and the gloves are put into a lysol solution, and by putting some of this solution into the gloves they can easily be put on.

If your hands have been in bichloride and you wish to put on gloves, have an assistant pour a very

little sterile green soap on your hands and you will experience no difficulty in putting them on. Remember about the green soap when you are having any difficulty in putting on gloves.

# Paragraph 101

TO STERILIZE GLOVES by boiling, wrap them up in a piece of gauze, or small napkin or towel, and place them in a vessel, either by themselves or with the instruments and dressings. It is well to sterilize one extra pair of gloves separately for the examinations prior to delivery, and the delivery gloves are sterilized with the instruments. When sterilizing gloves in a separate vessel, it is well to place a small plate over them to hold them down in the water, and then, after they have boiled thoroughly, they can be poured into the lysol solution. When sterilizing gloves in the home, always boil them.

# Paragraph 102

WHEN GLOVES are dry sterilized it is done with the regular sterilizer and they are put on dry after powdering the hands and inside of the gloves with sterile talcum powder. When putting on dry gloves, after immersing the hands in the lysol, bichloride and alcohol solutions, the hands must be perfectly dry before you put the gloves on. You see, we have wet and dry sterilization for gloves as well as for dressings. You will receive more detailed instructions on sterilization in your hospital practice from the superintendent in charge. Now, we want especially to call your attention at this time to the proper way to prepare the delivery room and patient in a home so that when you are sent out to prepare a patient for delivery, you will have everything in readiness when the physician arrives to take care of the case.

#### Paragraph 103

YOU WILL NOTICE quite a difference between the conveniences you have in the delivery room of our institution, or any hospital, compared with what you will find in a private home. In the former case you have everything needed right at hand and in the latter, unless unusual foresight has been used, you have practically nothing.

In homes you do not find the facilities to work with that we have in the hospital. In place of having the sterilizer to sterilize your dressings, towels, gloves, aprons, gowns, sheets, and so on, it will be necessary for you to use the kitchen stove as a makeshift.

# Paragraph 104

WHEN YOU HAVE TIME, take the dressings, towels, pads, cotton, etc., and place them in an old pillow case, or wrap them in an old sheet, sprinkle over it enough water to make it quite damp, and put in an ordinary bread pan and bake in the oven. Watch it occasionally. Dampen each package as required and leave it there until it is thoroughly baked, so to speak, that is, until the outer cover is brown, as we must use heat to kill germs and to sterilize our dressings and render them aseptic, and that is the way it is accomplished in the home.

## Paragraph 105

THE INSTRUMENTS will be given you by the physician in charge and you will proceed to sterilize them, in the following manner.

When time is an important factor and you have no dressing prepared before the call, take an ordinary good-sized hand towel, which is spread out to cover the bottom of the pan, needles, silk worm—gut, soft rubber catheter, 2 eye droppers, tape for tying the cord, and such instruments as are needed for a normal case; namely, 2 pair of scissors (straight and curved), one-half dozen artery forceps, needles, needle holder, and any other instruments ordered to be sterilized by the attending physician.

After you have placed these articles in the pan, cover them with the folded ends of the towel. Now take ordinary surgical cotton in pieces large enough to make a medium-sized sponge and place a great many of them on top of the towel that covers the instruments and articles needed for a normal case. Add to the above a fountain syringe wrapped

in a towel, which might be needed in case of hemorrhage. Now, put in as many towels as you need, a couple of Turkish towels and a few hand towels; cover them over with water and boil for about 20 minutes. It is well to put a large plate over them to hold the towels down and use the plate for the medicine droppers, ligatures (silkworn gut) needles and tape for tying the cord, so that they will not get mixed with the instruments that you will need to use in case of any laceration where repair work has to be done. You arrange these after they are cooled and ready for use.

# Paragraph 106

To cool the instruments and dressings that have been boiled in the dishpan, pour most of the water off and set them in the bathtub and let enough cold water run in the tub so that the pan will just float. Do not let any water get into the pan.

# Paragraph 107

You will need a basin for bichloride solution and one for lysol solution. Take two granite basins or some cooking utensil that will hold about two quarts, fill each about two-thirds full of water and place on the gas stove and boil thoroughly. Cool in the same manner by setting in the bathtub. Put four small, or one large, bichloride tablets in one vessel and three teaspoonfuls of lysol in the other. This will make the solutions of bichloride and lysol of sufficient strength, providing you have a quart and a half of water in each vessel. You had better measure it to be sure by using either a pint or quart cup, such as you will find in the kitchen. If you always measure the amount of water and know the exact quantity of drugs used, then you will make no mistake.

Now, in regard to these solutions of bichloride of mercury and lysol, let us consider them more fully and separately so as to give you a thorough understanding of each.

#### Paragraph 108

(a) THE BICHLORIDE. In hospital practice, to make the bichloride solution, you will use stock

solutions, but in private practice, you will use tablets, dissolving them in hot water and adding cold sterile water to make up the required solution, which should be about 1-3000, the strength generally used in obstetrical practice. Yet the strength may vary from 1-1000 to 1-10,000, as may be ordered by the physician. You must use care to avoid poisoning with bichloride, see that the tablets are thoroughly dissolved. Some physicians have discarded it entirely, others use it very little; personally we have never seen any bad effects and feel safer when it is used. The tablets are made in two sizes, 7 3/10 grains and 1 41/50 grains. Three small tablets or one large tablet to the quart of water makes a 1 - 3000 solution. Always use the colored tablets. They make the solution blue.

## Paragraph 109

(b) LYSOL SOLUTION. This solution is in general use, I believe, among all obstetricians. It is a preparatory antiseptic containing fifty per cent of Creosol and Tincture of Green Soap, Liquor Creosolis Compositus is the official name. Some hospitals use stock solutions, but the use of the pure drug is very convenient, and in private practice you will make up the solution by adding three drams (three teaspoonfuls) of Lysol to a quart of sterile water. This makes a one per cent solution, which is the required strength. Remember, always measure both the water and lysol. Do not trust to guesswork.

# Paragraph 110

There is a new antiseptic and germicide on the market known as Ziratol that bids fair to take an important stand in obstetrical practice. It is supposed to take the place of both Bichloride and Lysol. The manufacturers make great claims for it. To make the solution of required strength, add four (4) teaspoonfuls to a quart of sterile water. Personally, we have not used it.

## Paragraph 111

Now, in addition to the bichloride and lysol solutions, you will need both cold and hot sterile

water. A good way to secure sterile water is to take four ordinary quart fruit jars with covers and boil them thoroughly in a large pan or washboiler. After they have boiled twenty minutes, fill them up with boiling water and put the covers on just tight enough to cover the jars. Set them aside to cool. If in a hurry, cool them quickly by setting them in the bathtub. Be careful and not have too much water in the tub. This will give all the cold sterile water that will be needed. You can put a kettle of water on the stove to boil for the hot sterile water. Always keep plenty of hot and cold sterile water on hand.

# Paragraph 112

If you are required to hurry, and do not have time for so much detail, you can hasten matters by disinfecting the vessels that you want to make your solutions in by putting about one tablespoonful of alcohol into the pan or basin you wish to sterilize, rinsing it around so that you are sure the alcohol gets all around on the sides of the vessel, as well as the bottom. Then light the alcohol with a match, being careful that the flame sets nothing afire, including your own clothing. This will sterilize a vessel very quickly and effectively. The vessel should be thoroughly washed first and a little bichloride solution put into it and rinsed out with sterile water; then sterilize it with alcohol, as directed. Put in one and a half quarts of boiling water, and when cool, it is ready to use to make any solutions that you wish; or to save time, if you have it on hand, use the required amount of cold sterile water to cool the hot.

## Paragraph 113

You will also need a small dish. Take one that you will find in the cupboard; sterilize it thoroughly, as directed with alcohol, then fill it about two-thirds full cold of bichloride solution and place your catgut ligatures in same: two tubes of No. 2 Plain, and one tube of No. 2-20 day. Remember, you should have at least one and one-half quarts of bichloride solution and the same of lysol solution.

Two quarts are better, if the containers you use will hold it. These solutions are used to disinfect the hands as well as the patient during confinement. It is not necessary to complete the sterilization of your hands until you have finished getting the dressings and solutions ready for use.

# Paragraph 114

Remember, after you have sterilized the articles required, made your solutions, etc., be careful that they do not get infected by someone touching them, or by getting unsterilized water into the basin, and let us say here that many wouldbe nurses, or neighbors who come in to give a helping hand, have a habit of boiling water to render it sterile, and then putting their unsterile fingers into it to see if it is cool. We might also mention that they will do the same thing with dressings, sterilize them and the next minute contaminate them by handling them with unsterile hands. If any of you wish to test the temperature of the water, after a little experience you will be able to test same by putting your hand on the outside of the vessel; but if you cannot tell in this way, pour a little of the water over your hand and you can test the temperature of the water without infecting the sterile water. Never let us see or hear of any of you making such a mistake, that is, to boil water to render it sterile, then put your unsterile hands into it to test the temperature.

# Paragraph 115

In the home it is always best to confine a patient on the kitchen table. Put the table in the most suitable room. It is prepared by using an ordinary kitchen table, placing some newspapers over it, and putting over them a quilt folded into several layers; upon that put a few layers of paper to protect same, then a sheet on top of the papers; add to this a Kelly pad and a pillow, and we have a very good obstetrical operating table. The patient can grasp the side of the table during the pains; two assistants can support the limbs, and she can let her feet rest on the table.

# Paragraph 116

After the delivery, your patient is placed back into a clean bed and made comfortable. While the woman is in the second stage of labor, prepare the bed for your patient the same as you have been instructed. See that the linen is changed on the bed and have a hot water bottle placed at the foot, so as to have the bed good and warm. By using a table in place of a bed upon which to confine the patient, both physician and nurse can do better work. Put plenty of newspapers on the floor under the end of the table, and a slop jar for the fluid from the Kelly pad to drain into. In this way you can keep everything very clean and sanitary.

#### Paragraph 117

You will find it very convenient in some homes to use the kitchen for a delivery room; then the linoleum on the floor does not need any protection.

# Paragraph 118

In connection with the preparation, the list of articles needed, and to be furnished by the patient for labor in the home, are as follows:

- 3 Hand basins of graniteware (1 for bichloride solution, one for lysol solution, and one for sterile water; the one used for sterile water can be used during the third stage of labor to receive the afterbirth.
- 1 Ideal bed pan, and a slop jar;
  Rubber sheeting enough for the bed (a piece
  a yard square;
- 20 yards bleached dairy cloth or gauze;
  - 2 pounds of sterile absorbent cotton;
  - 5 yards of plain gauze;

  - 2 medium-sized pitchers, glass or china;
  - 1 hot water bottle;
  - 4 ounces boric acid crystals;
  - 4 ounces of lysol;
  - 1 large bundle newspapers;
  - l pint of alcohol; Small bottle of olive oil; Pure Castile soap;

Plenty of towels, large and small (half a dozen each);

Half dozen new sheets;

2 Yards of muslin for abdominal binder and T bandage.

# Paragraph 119

These are the things that the patient should have in her home, and with this outfit you will be able to make the dressings. When you are engaged for a case, you will call at the patient's home one week or so before the day reckoned for her confinement. You will make up your supplies and sterilize towels, sponges, pads, cotton applicators, sheets, etc., and have the complete outfit ready to use when needed.

# Paragraph 120

Take a sufficient amount of one pound of cotton and make it into pledgets, or sponges, of convenient size, pack into glass jars, and sterilize in the cook stove or gas oven. Gauze sponges can be sterilized in the same manner. It would be well to have two jars of cotton sponges and two of gauze sponges.

# Paragraph 121

To make the gauze sponges, take a piece of gauze about one foot square and fold it with the edges turned in, so that it makes a sponge about three inches square. Take the other pound of cotton and make it into large vulvar pads, and cover with gauze, which can be wrapped up in packages of six and sterilized.

#### Paragraph 122

You make cotton applicators by wrapping a small piece of cotton around the end of a toothpick, sterilize one dozen in a package wrapped in a piece of gauze. They are to be used in care of baby—for cleaning the nostrils and ears or applying any required medication.

## Paragraph 123

You can sterilize a bunch of newspapers by baking them in an oven, and they will serve for any purpose, for example: to wrap up basins, towels,

and sheets, that have been sterilized and to lay on tables and chairs to avoid marring them during labor. After everything has been sterilized, the packages are put away in a clean drawer or trunk and your maternity outfit contains all the needed utensils, such as basins, gauze, dressings, pads, sheets, towels, etc., already sterilized, neatly packed and ready for use. At the time of labor, the physician finds things all prepared and ready—a most comforting feeling. To be well prepared is half the battle.

You will receive full instructions how to make sponges, pads, etc., when you take your training in that department. Now, in some cities we have concerns that furnish a 'complete sterilized obstetrical outfit', and these are furnished to the patient direct. It will be much to your advantage, both financially and professionally, to operate your own sterilizer in connection with your private practice—you make up your supplies and sterilize them ready for use—so when the physician calls you on a case you can furnish the outfit yourself. You can also make arrangement with the Seattle Maternity Hospital to make and sterilize your dressings and ship them to you ready to use.

## Paragraph 124

Let me give you a complete list of such instruments and supplies that the physician's grip should contain and the balance or in part be supplied by the patient or yourself, so that in case of the ordinary complications, you will know what is required:

1 Kelly pad;

Tape for tying the cord;

1 rubber catheter No. 7;

2 medicine droppers;

1 ounce normal salt solutions;

1 ounce nitrate of silver, 1%;

1 ounce fluid extract of ergot;

3 ampules of ergot for hypo;

3 ampules of pituitin;

2 small cans ether;

4 ounces liquid green soap;

## LECTURES OF INTEREST TO WOMEN

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3 ampules of sterile camphorated oil;
3 tubes 20-day chromic catgut—No. 2;
4 curved needles, 2 sizes (2 cutting and 2
  round);
Silkworm gut (at least one-half dozen strands
  medium size);
4 ounces alcohol;
l auto strap safety razor;
1 hypodermic syringe;
Half dozen artery forceps;
1 needle holder;
2 pair of scissors (1 pair straight and 1 pair
  curved, for Episiotomy);
l pair of Jackson retractors;
1 uterine irrigator;
3 ampules of adrenalin, 1:10,000;
2 pair of vulsellum forceps;
2 intestinal forceps for holding cervix;
1 placenta forceps;
1 pair of Simpson obstetrical forceps;
1 pair of tissue forceps;
l pair long uterine packing forceps;
2 broad retractors;
l anaesthetic mask;
1 baby scale;
1 lung motor;
2 pair of rubber gloves;
Nail brush and file;
1 bottle bichloride (small) tablets;
4 ounces lysol;
1 large solid rubber bougie;
1 fountain syringe;
               Paragraph 125
And for a post partum hemorrhage, you will
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need, in addition to the above, providing it is necessary to pack the uterus:

One 12-yard jar of iodoform gauze;

One 6-yard jar of same (the gauze in both jars is three inches wide);

One needle for giving salt or soda solution; Three one-dram bottles of sterilized salt; Three one-dram bottles of sterilized bicar-

bonate of soda;

# Paragraph 126

Now, the average physician will not furnish you as complete a list of instruments and supplies as this, but you must have the following for a normal case:

1 Kelly pad; Tape for tying cord; 1 auto strap razor; Needle holder; Needles: Ligatures (both silkworm and catgut); Soft rubber catheter No. 7; Two pair of scissors (straight and curved); One-half dozen artery forceps; 2 medicine droppers; 1 ounce normal salt solution; 1 ounce nitrate of silver, 1%; 1 ounce fluid extract of ergot; 3 ampules of pituitin; 2 small cans ether; 4 ounces liquid green soap; 2 pair of rubber gloves; Nail brush and file; l'bottle bichloride (small tablets); 1 hypodermic syringe; 4 ounces alcohol; 4 ounces of lysol; Fountain syringe;

## Paragraph 127

The nurse's grip should contain:

One hypodermic syringe;

Fever thermometer;

1 pair of scissors;

4 ounces of green soap;

4 ounces alcohol;

1 auto strap razor;

2 test tubes;

1 small bottle of bichloride tablets;

Reagents for testing urine;

2 ounces lysol solution;

Fountain syringe;

Rectal tube;

Rubber gloves;

Sterile gown; Orange sticks; Nail brush and file; I soft rubber catheter No. 7.

# Paragraph 128

The physician will supply you with the necessary instruments, or you can select them from his grip and sterilize them by boiling as mentioned above.

# Paragraph 129

We will suppose your patient is having labor pains, the beginning of the first stage when you arrive. You will immediately ascertain the condition of the bowels and note if the kidneys are acting, and examine the urine for albumen. If you have an instrument, take the blood pressure. If the pains are coming on regularly, and after your observations and examination you are satisfied that the patient is in labor, you should immediately give her an ordinary soapsuds enema, get the bowels to move freely, and be sure that the lower bowel is free from all fecal matter. It is generally necessary to give the second enema or even the third. See that the water returns perfectly clear, only use plain water after the first enema.

# Paragraph 130

Give your patient a shower or sponge bath.

Remember that during the last few weeks of pregnancy, or just befor labor, it is not advisable to give a tub bath. It is better to give her a sponge or shower bath; then there is no danger of the water getting into the vagina.

# Paragraph 131

Prepare the bed, and give the patient the proper external care. You will see that the bladder is empty and render the external parts thoroughly aseptic. You will do this by clipping the hair very close over the mons veneris, and shaving the parts below. Some prefer shaving the mons veneris, also. We do this in the hospital. Now scrub the limbs

above the knees and the genitalia thoroughly with liquid green soap, using plenty of water. Separate the labia and remove all the smegma and give all the parts a thorough scrubbing. Then wash all the parts off with bichloride solution, 1-3,000, and last with a 1-400 lysol solution. If the surroundings are not the cleanest, and you want to make doubly sure that the parts are aseptic, after using the lysol, wash off the genitalia thoroughly with 40% alcohol.

# Paragraph 132

After this, during labor, if the parts become soiled, simply cleanse them with lysol solution. Just prepare a little of the solution—a quart is enough—for immediate use in some basins. Ordinary china or glass water pitchers, as found in the home are very convenient. While making these preparations, the patient should be placed on a douche pan, or Kelly pad, in order to keep the bed from being soiled, or, if the pains are not too severe, all these preparations can be made in the bath room, the patient lying down in the bath tub while you are preparing her, having first thoroughly cleaned the tub with bichloride solution. Always shave your patient first while in bed.

#### Paragraph 133

If you have not been called to the case prior to the time of confinement, and you must make your supplies as labor progresses, and if it is only the beginning of the first stage, you will generally have several hours for this work.

#### Paragraph 134

For immediate use, take plain sterile gauze and cut off a piece about seven inches long (from the five-yard package), and place it locally over the parts as soon as you have rendered them aseptic. If the parts became soiled, which necessitates the changing of same, it is well to wash the parts off with lysol solution occasionally, in order to keep them perfectly antiseptic. Sterilize your rubber gloves by boiling and have them ready for use, so that if it becomes necessary for you to make a vagi-

## LECTURES OF INTEREST TO WOMEN

nal examination in order to tell what time to send for the physician, you will be ready to do so.

## Paragraph 135

Never make a vaginal examination unless you call up your physician who has charge of the case, and get his permission, or ask his advice. Often you can save the doctor hours of time and an extra visit. You will be taught how to make these examinations, and intelligently note the advancement the patient is making.

The rapidity of the descent of the head may easily and safely be determined by pressing the fingers upward and inward along the sides of the vagina. It is an external examination, the details of which we will show you in a clinical demonstration.

In the meantime, prepare the bed and table, sterilize the dressings and get everything ready for the confinement. Have cold and hot sterile water on hand and get everything as nearly ready as you can, following the instructions that we have given you, so that you will have everything in readiness when the physician arrives.

HOW TO MANAGE A NORMAL CASE OF LABOR, INCLUDING THE AFTER CARE.

#### Paragraph 136

We will instruct you at this time how to conduct, or manage, a normal case of labor, including the after care, while the patient is in bed; what is known as the lying-in period: the Puerperium.

# Paragraph 137

Now, what we mean by a normal case of labor is a head presentation without any complications, and the child and afterbirth are born at least within twenty-four hours from the beginning of labor and without any help to the uterus. Breach and face presentations can be considered under normal labors, when they terminate unaided, as they often do, within the twenty-four hour limit.

# Paragraph 138

You have been instructed how to prepare your patient, how to prepare the bed, table, solutions, instruments, etc., and we are sure you will not forget in this preparation to be scrupulously clean; to have everything sterile and to keep everything in an aseptic condition, because you, as nurse, will be personally responsible to a certain degree if any infection occurs. You will be notified when labor begins and will go to your case several hours ahead of the physician. You will ascertain if the woman is in labor, watch how the case is progressing, have everything in readiness, and it is your duty to keep the attending physician informed as to how the case is advancing and to call him in due time.

# Paragraph 139

LABOR is divided into three stages:

THE FIRST STAGE is the stage of dilatation; that is, the dilating of the cervix; therefore, the first stage of labor is from the initial opening of the closed cervix to its full dilation.

THE SECOND STAGE is the stage of expulsion or delivery of the child. It begins after complete dilation of the cervix and ends with the birth of the infant. In this stage the pains grow stronger, more frequent, and change in character being expulsive.

THE THIRD STAGE is the stage that extends from the delivery of the child to the delivery of the afterbirth, or placenta and membranes, and the complete contractions and retractions of the uterus.

# Paragraph 140

You must become familiar with each stage; know what your duties are in each case and be able to tell when the first stage ends and the second stage begins; and to know when the patient is actually in labor. You have four conditions that will assist you greatly in deciding the last question, 'Is the woman in labor?'' They are as follows:

1. When the contractions of the uterus are

painful and the pains are generally in the back and occur every fifteen to twenty minutes.

- 2. When the head is fixed between the pains. Thus you can often determine by feeling the head above the symphysis.
- 3. The show—there is almost always a mucous discharge from the vagina, often tinged with blood, at the commencement of labor.
- 4. The dilatation of the cervix, especially the internal os.

Now, if we consider each of these conditions separately, it will help you to determine if the woman is in actual labor, and you will be able to tell more from the knowledge obtained from the condition of the pains than the other three.

# Paragraph 141

FIRST: When the labor sets in, the patient becomes aware of the uterine contractions from the pain they cause her. The pains usually begin in the back, and increase in severity until they extend to the abdomen and occur every fifteen to twenty minutes. If you will ask your patient to go to bed, if she is not already in bed, you will see if the contractions of the uterus are really painful. You will palpate the uterus gently and note when it hardens. Ask your patient to tell when she has pains. Now, if the uterus hardens and she tells you she is having a pain in her back at the same time, it is almost a certainty that she is in labor.

# Paragraph 142

SECOND: In order to see if the head is fixed, use Pawlick's grip. You will note that the head cannot be moved from side to side, or only just a trifle. The reason you cannot move the head is because the lower uterine segment contracts firmly around it and keeps it in place. If the head is freely movable and the contractions are not painful, the patient is not in labor.

To employ Pawlick's grip, face your patient, grasp the presenting part just above the symphysis—the thumb on one side of the head and the fingers

on the other. Now, with firm and gradual pressure, the thumb and fingers sink well down on both sides of the head, in normal cases, and grasp the head, which does not move if the woman is in labor. This sign is only useful in the case of a woman who has had children, but it is not to be used in the primipara, for in these cases the head is fixed some three weeks before labor, as will be demonstrated to you in your clinical work.

## Paragraph 143

THIRD: To see if there is any flow, turn your patient on her left side and examine her carefully, and if blood stains with a mucous discharge are present and passing from the vagina, it is certain that the woman is in labor, especially when pains are present. Yet the absence of this discharge does not prove that the woman is not in labor. Sometimes there comes away, two or three days before the onset of labor, mucous from the cervical canal, but you must not confuse this with the vaginal discharge.

## Paragraph 144

FOURTH: You will not make a vaginal examination to see how dilatation is progressing unless instructed to do so by your attending physician. If it becomes necessary for you to do this, you will proceed as you have been instructed; that is, give your patient an additional external cleansing with lysol solution and you will also render your hands sterile, having sponged off the parts thoroughly. Have your patient lie on her back. Separate the parts and give them an extra sponging. Put on your gloves and insert the two fingers of the right hand into the vagina. Just before inserting the fingers, dip the hand with the glove on into the lysol solution and this will be all the lubricant that will be necessary. Vaseline or any other lubricant is rarely, if ever, needed to lubricate the fingers in making a vaginal examinatinon. You will note the amount of dilatation, the condition of the cervix and how far the head has advanced, and if the bag of waters are forming. If a vaginal examination is made at the beginning of labor, you will not

# LECTURES OF INTEREST TO WOMEN

be able to feel the cervix, because it will be too far back. During the process of labor, the cervix will feel as a hard ring, or band, around the bag of waters, and as labor advances it increases in size until the cervix is completely obliterated, and this is when the second stage of labor begins.

# Paragraph 145

Now, to tell when the pains of the second stage begin, you will note they are characterized by the patient bearing down with each pain. Your patient gets red in the face, often sweats, and the pulse quickens during the pains. The pains last longer, come more frequently and are more painful than those of the first stages. After a little practice, you can almost always tell the difference between the pains of the first and second stages, because in the first stage they are much shorter in duration, less violent, and less frequent, and as the second stage advances, the bulging of the parts occurs with each pain. The bag of waters generally rupture any time during the second stage. So you might say the time to send for the doctor is when the second stage of labor begins and there is pressure against the perineum. Do not wait too long to call the doctor. Note how long it will take him to arrive. When convenient, it is a good plan to have the physician call early in the case, so he can personally note the patient's condition, then return when needed for the delivery. It is much better that you make the mistake of sending for him an hour too soon than twenty minutes too late, because if the baby is born before the physician arrives, you will get your share of the blame.

HOW TO MANAGE THE DIFFERENT STAGES OF LABOR.

#### Paragraph 146

# FIRST STAGE:

When you first arrive, you will ascertain if the patient is in labor and if so prepare her for the confinement. Arrange the bed and room, prepare the table to be used during the second stage. See that all supplies are ready, and plenty of hot and

cold sterile water. Get things ready that you will need for the baby. Sterilize the basins for the different solutions, for bichloride and lysol. Don't forget the boracic acid solution, that you will need for the baby's eyes and mouth.

# Paragraph 147

During the first stage of labor, prepare the patient, see that the solutions are at hand, such as bichloride and lysol, have the gloves ready, as well as all other necessary articles for examination.

You will take an inventory and see that you have everything in readiness for the physician when he arrives, a place and articles needed to prepare his hands, including solutions and gloves for the first examination.

# Paragraph 148

As soon as you take charge of the case, you should take the temperature, pulse, respiration, examine the urine and blood pressure, if you have an instrument, and keep a full record for the doctor's information, using record blanks the same as we use here in the Hospital.

It is not necessary for your patient to be confined in bed all the time during the first stage. You must see that she takes nourishment occasionally in order that she does not become exhausted, and in this way you will be able to keep up her strength.

# Paragraph 149

As a general rule, patients during labor have very little desire for food, but they should be made to take nourishment in order to keep up their strength. If they go too long without food, especially in prolonged cases of labor, they are apt to have a postpartum hemorrhage, on account of the general weakened condition. The patient should have food, especially in liquid form, at regular intervals. Ice cream is good, or anything that is nourishing and digestible. Sometimes patients will vomit, but even then they should be given food.

## LECTURES OF INTEREST TO WOMEN

# Paragraph 150

You will select the sunniest and best room in the house for the lying-in period, one with plenty of light. It should all be arranged so you will have plenty of light during the night time as well. Remove all unnecessary furniture, have a cot in the room for your own use and you will make no mistake to have the woodwork and floor thoroughly washed with a 1-1000 bichloride solution.

# Paragraph 151

In some homes you will come in contact with ignorant relatives who will object to what they term as 'unnecessary preparation and that the patient's mother was not delivered with so much fuss and ado.' Here, a little tact on your part and explanation will clear the way. Do not force such advancements. You must educate and gently lead them into your way of thinking and doing.

# Paragraph 152

If the first stage of labor is prolonged, it may be necessary to give an extra enema, as the bowels must be thoroughly emptied during the second stage. The patient should urinate every four hours, as the bladder must also be emptied at the beginning of the second stage.

SECOND STAGE:

## Paragraph 153

You will recognize the second stage of labor by the pains being more expulsive and more frequent. You will immediately see that the bladder and rectum are emptied. At the beginning of this stage your patient will in all probability feel more comfortable to remain in bed for a short time at least. During the pains she will have a desire to bear down and it is a good plan to have something for her to pull upon.

#### Paragraph 154

It is a good idea to take an ordinary sheet and twist it up in a sort of a roll, do this by taking two diagonal corners, have an assistant hold one and you the other; give it a whirl; then tie a knot in each end and place it around the rods on the foot

of the bed. Now with the patient's feet against the foot of the bed as a support, have her grasp the sheet just above the knots, one in each hand. The knots can be regulated according to the length of the patient. As labor advances, and you notice the rapidity in which the child is being expelled, or the rupture of the bag of waters, you will inform the attending physician and at the same time get the patient on the table for the delivery. It is well to inform the physician when the second stage of the labor begins and, in that way, he can be prepared to answer your call when needed. Always remember to have a good estimate as to how long it will take the doctor to arrive after you call him. You keep him posted on any special detail. Prepare a place for him to sterilize his hands. Have basin, soap, brush and nailfile all ready as well as sterile gloves for first examination. Between the pains you will make up your solutions, and if you have not the instruments at hand until the physician arrives, you will have a basin, the dishpan, with boiling water, so as to sterilize them quickly. Get the solutions ready, keep them warm during this stage and change them occasionally as needed; also have a little basin ready to sterilize the physician's gloves for the delivery; and you will find that it will be of great advantage if possible, to take the doctor's grip with you when you are first called on the case or have him leave it on his first visit or send it to you, then you can have everything ready when he arrives. Prepare your hypodermic and see that it is ready for use in case the doctor wishes to administer any hypodermic during this stage.

## Paragraph 155

Place the patient on a table for delivery in due time, and during the second stage administer ether, as you have been instructed, as this will relieve the patient greatly of her sufferings and if properly administered, as you have been instructed with other drugs, it makes labor almost painless. It is AMERICA'S TWILIGHT SLEEP, and, in our opinion it is free from all danger and harm either to mother or child.

## Paragraph 156

NITROUS OXID-OXYGEN is the latest anaesthetic for obstetrical work, and is administered by a special apparatus. It is the ideal one, and when administered as instructed by the attending physician, it gives the most satisfactory results and renders childbirth painless, and at the same time prevents surgical shock. It is worth the additional cost to the patient, and should be used whenever it is possible to be obtained. (See Painless Childbirth.)

## Paragraph 157

To get the best effect from an anaesthetic for a confinement case, it should be given at the commencement of each pain. Using planty of ether on the inhaler, instruct the patient to take a few deep, quick breaths and inhale all the ether she possibly can; then take the mask away and tell her to hold her breath and bear down. If the pains are excruciating, give her a whiff or two as the pain ceases, then no more until the next pain begins. Just as the head is being born (the attending physician will instruct you when this takes place), you will completely anaesthetize your patient for a few minutes. The doctor may wish to perform episiotomy and by having your patient anaesthetized at this time, it prevents any pain, helps to dilate the soft parts by relaxing the tissues, and makes the delivery of the head and shoulders painless.

## Paragraph 158

A good plan is to give the ether from an ordinary drinking glass. First, put in the bottom of the glass a little cotton, then pour about a teaspoonful of fresh ether on the cotton at the beginning of each pain, and place the glass over the patient's nose and mouth. When help is scarce the patient can hold the glass herself; and by turning it upside down on the pillow, it will save the ether and then it will not require fresh ether each time.

## Paragraph 159

You will sterilize your hands, so that they can be re-sterilized very quickly in order to give the physician any immediate assistance that may be

required. Care for the baby's eyes and mouth as directed.

## Paragraph 160

Now, let us take it for granted that you are unable to get the physician and the baby is born before he arrives. You will deliver the head and shoulders, as instructed in our clinical work. You will hold the head back until you are quite sure that there will be no tear, and protect the perineum as best you can.

## Paragraph 161

What we want especially to call your attention to is the tying of the cord.

After the baby is born, and you have washed out the mouth and eyes, you will gently compress the cord between thumb and fingers and see if it pulsates, do not attempt to tie it until after the pulsation has ceased. With the umbilical tape, or suitable ligature, the cord is ligated close to the skin margin of the navel, a distance of about one-half to three-quarters of an inch. It is important to leave as little as possible of the cord to be cast off, because a short stump is less likely to be dragged upon and easier to dress than if left too long. The tying must be made very secure. This is accomplished by tying the knot slowly and interruptedly giving time for the jelly of Wharton to escape from under the tape. After the first knot is tied it is well to reinforce the ligature by making a knot on the opposite side of the cord, using the same ligature, a trifle closer to the skin margin of the navel, leaving a very small portion of the cord between the two ties. This gives a double tie which will be a safeguard against any hemorrhage occurring.

If you have a pair of artery forceps, draw the cord gently, yet tightly, from the vagina and apply the artery forceps, and clamp the cord about three or four inches from the vagina. Then with a pair of sterile scissors cut the cord close to the ligature, leaving about one-quarter of an inch. If you have not a pair of artery forceps, use the umbilical tape, and tie the cord at the same place

as directed to apply the artery forceps. This ligature keeps the blood in the placenta, which gives the uterus a firm body to act upon. You can also tell as to the advancement of the placenta, and when it comes down into the vagina the distance from the forceps, or from where the cord is tied, is increased as the placenta advances into the vagina, and is being expelled from the uterus.

## Paragraph 162

Again, if you are so unfortunate in your nursing as to be compelled to attend a confinement case with no physician present, and the child is born practically dead, you must not only tie the cord but treat an asphyxiated child, and it is of great importance to ascertain if the asphyxia is mild or severe. When the asphyxia is only mild, the simplest treatment is usually successful; if severe, then no time must be lost to employ efficient measures to cause the child to breath.

## Paragraph 163

When you have a case of asphyxia, either mild or severe, you have three very important principles to govern the treatment. First, see that the air passages are clear from all mucus and secretions; second, maintain the body heat; third, supply oxygen to the blood.

## Paragraph 164

We will suppose that you are attending a case of confinement, and the physician does not arrive in time to attend the birth, and the baby is born in the state of asphyxia. What are you going to do? Follow this routine of treatment, and keep in mind the three cardinal points that we have just given you.

## Paragraph 165

Number 1—At first you may not know whether the case is mild or severe. You will clear out the mucus from the mouth and throat, and before tying the cord, let the child straddle the arm, holding it with two fingers on each side of the neck, and support it by resting the fingers on the shoulder,

letting the head hang downward. Sprinkle it with cold water, and slap it on the back and buttocks. This position will assist in clearing the air passages—that is the throat, mouth and nose—of all mucus secretions. Slapping and sprinkling it with cold water, as directed, is all that will be necessary in mild cases, and if this does not stimulate the child to breathe, you may know you have a severe case of asphyxia to deal with.

#### Paragraph 166

Number 2-Imediately tie the cord, and have an assistant hold the child by the feet, the forehead resting slightly on the table so as to deflex the chin and straighten out the trachea. You will shake the child gently, and place one hand on the chest, and the other on the back, and squeeze it gently, which will have a tendency to force out any mucus or fluid that may be contained in the bronchi. While the child is in this position, wipe out the nose, mouth and throat; then suddenly release the pressure on the chest and, possibly, you can hear the air rushing in. Let us hope so. The compression and sudden release may be repeated 16 to 20 times a minute. Do not continue this treatment longer (more than a minute or so). If this fails, try the warm bath.

## Paragraph 167

Number 3.—Now while you are giving this treatment (No. 2), have someone get you a pan of warm water; place the infant in it, and at the same time grasp the tongue with the intestinal forceps, gently drawing it back and forth at the rate of 30 to 40 times a minute. This should consume only 2 or 3 minutes time, as the infant should not be kept in the warm bath longer than that time. When the infant is taken out of the bath, wrap it up in a warm blanket, and let us impress upon your minds the necessity of keeping the infant warm at all times. We don't think this is generally appreciated as it should be, because exposure, if prolonged, only increases the shock. If treatment No. 3 is not successful, try No. 4.

## Paragraph 168

Number 4—After the infant is wrapped up in the warm blanket, take a piece of gauze, place it over the infant's mouth, and blow air into the lungs. Do this a few times at regular intervals; then give a few movements of artificial respiration.

## Paragraph 169

Number 5—If there is still no sign of breathing, use the lung motor. While you are trying the above treatments (2, 3 and 4), see that someone is getting the lung motor ready, and put it into immediate use. Our experience has been that the lung motor is a very useful instrument in these cases, and will save more infants than any other treatment. It is very important that you thoroughly understand its use and be able to operate it correctly, and apply it as your chief aid in resuscitating the child. During any of the treatments, if at any time the infant begins to breathe, all treatment should cease, because added treatment after this will do more harm than good.

## Paragraph 170

Be sure and keep the infant well wrapped in the warm blankets, and keep up the use of the lung motor as long as there are any heart beats. If there is no indication of the infant's breathing after an hour's treatment with the lung motor, there is little, if any, hope of saving it.

#### Paragraph 171

Watchful after-care is important, because we sometimes have a secondary asphyxia. Especially is this true if the case is one of difficult delivery—that is one of severe operative procedure. In secondary asphyxiation the treatment is not at all satisfactory, because there is generally some trouble in the pulmonary circulation. When asphyxia re-occurs, the infant generally dies.

## Paragraph 172

During the second stage of labor the physician may order hot towels, wrung out of lysol solution and applied to the perineum. This causes a

relaxation of the tissues and assists in dilating the soft parts.

## Paragraph 173

In managing the second stage of labor, when the head begins to press against the perineum, it is a safeguard to place your hand above and on the uterus, and keep it there with firm pressure until after the child is delivered, and continue to exert sufficient pressure on the uterus to keep it firmly contracted upon the after-birth. If you are busy assisting the doctor, it is well for you to instruct one of the other attendants or nurses to do this for you. Keep close watch and see that they do this right and that they keep their hand in the proper position, as you will be instructed to do. The uterus should be gently massaged for some time after the delivery of the after-birth. Be sure it is well contracted before applying the abdominal binder. Remember, you or someone else must keep a gentle pressure on the uterus from the time the head begins to press on the perineum until the abdominal binder is applied.

## Paragraph 174

After the baby is delivered, and handed to you, you will place it in its basket on its right side wrapped in a warm blanket, so it will receive no shock, and if the mouth and eyes have not been washed out, this should be done with boracic acid solution at once. The mouth and eyes should be washed out while the physician is tying the cord, or better still, as soon as the baby's head is delivered. If possible, wash out baby's mouth and remove all the mucous you possibly can before it cries while the doctor is delivering the shoulders.

## THIRD STAGE:

## Paragraph 175

After the delivery of the baby and you have placed it in it's basket, assist the doctor in the care of the patient in the delivery of the placenta, and assist in any repair work that may be necessary. It may be necessary to make up fresh solutions, especially the lysol. After the after-birth is delivered, you will watch the

uterus or you see that someone present assists you to do this. Be careful to instruct them how to hold the uterus and watch them very closely to see that they do as you tell them. After the delivery of the after-birth, it may be necessary for you to prepare the hypodermic of ergot, or administer ergot by the mouth, as directed by the attending physician, as during this stage you will be ready at all times to comply with his demands. Make yourself useful by being quick to anticipate his needs. If there is any repair work to be done, place a clean towel on the Kelly Pad over the soiled one, and sterilize your hands. The doctor needs your help and assistance during the repair work. Your duty is to sponge the parts, thread the needles with the silkworm catgut suture, plain catgut or chromic catgut, as he may direct. After the stitches are in place, providing there were lacerations needing repair, you will clean the patient thoroughly, using lysol freely, remove the Kelly Pad, put on a liberal supply of sterile perineal pads and abdominal binder as directed and return your patient to bed, which has previously been prepared, so that she may have the desired and needed rest.

## Paragraph 176

After you have placed the baby in its basket, inspect the cord occasionally to see if there is any hemorrhage and, if you notice the slightest amount of oozing from the cord, call the physician's attention to it at once, or retie the cord.

## Paragraph 177

You will use a sterile basin (the one that contains the sterile water, emptying it first), to receive the after-birth. After it has been delivered, the doctor may have you give the patient a dose of ergot, one dram (one teaspoonful) of the fluid extract by mouth or ICc. Ampoule hypodermically. Always give hypodermic of ergot deep into the muscles of the leg, or thigh. Some doctors give ergot as a general routine. Others do not. We think best to give it and be on the safe side.

## Paragraph 178

If there is any laceration, or if episiotomy has been performed, you will supply the doctor with such instruments and suture material as he may direct, and it will assist him greatly if you render your hands sterile and give him the necessary assistance while doing the repair work.

## Paragraph 179

Use lysol solution freely and wash off the parts. Place a clean, sterile towel under the patient. Do not remove the Kelly pad until all suturing is completed.

#### Paragraph 180

After the delivery of the after-birth and when the parts, if lacerated, have been repaired, you will clean your patient by washing the parts thoroughly with lysol solution, remove the Kelly pad and turn her partially on the side; wash and dry the buttocks, put on pads and the abdominal binder, providing the uterus is well contracted. Have a sufficient supply of perineal pads to catch the discharge, because there is more or less flow the first few hours after delivery.

## Paragraph 181

In putting on an abdominal binder, you will begin to pin it from above, downward, very snugly and place a pad just above the uterus. If there happens to be a clean roller towel, roll it up and place it above the uterus in the form of a half circle. This will assist in holding the uterus in position. With the binder and pads applied as directed, holding the pads on with a T binder, the patient is ready to be returned to her bed.

## CARE OF THE PATIENT AFTER CONFINEMENT:

#### Paragraph 182

The physician in charge of the case will make his first visit within fourteen to eighteen hours after the birth of the child and will make daily visits for six days, and then every other day

until the patient is able to sit up. The principal conditions which you should keep a record of, and report to the doctor at each visit, relative to the mother, is the temperature, pulse, height of the uterus, the lochia, the breasts, bowels, the urine, diet, amount of sleep; as regards the baby, condition of the bowels, action of the kidneys, nursing, its weight, cry, the navel, the eyes, color of skin. It is the nurse's duty to be thoroughly familiar with all of these conditions, especially in normal cases. Then she will be able to report any abnormal conditions to the attending physician. We will therefore consider at this time , somewhat in detail the points of interest just mentioned in regard to care of the mother.

## Paragraph 183

1. TEMPERATURE: During the first twentyfour hours after confinement, the patient's temperature is very likely to rise. As this is an unstable period, the temperature curve will vary and has little, if any, significance, but if the temperature rises above 99 degrees Fahrenheit, after the first twenty-four hours, a cause must be ascertained and you will report the case immediately to the physician. So remember that a temperature above 99 degrees indicates some abnormal condition. When the temperature is above 99 degrees see that the bowels move regularly. Often absorption from the intestinal tract will cause an abnormal temperature. We think that an excessive secretion of milk will also cause the temperature to rise.

#### Paragraph 184

2. PULSE: What is said of the temperature can also be said of the pulse. That is, it may vary during the first twenty-four hours, but after that time, if it is over 90 beats per minute, we have an abnormal condition to contend with. If the pulse is over 100 after delivery watch for hemorrhage. Also remember that the temperature should remain at, or below, 99 in all normal cases. Nervous conditions will often increase the pulse

rate and temperature may rise in such cases, if the nervous condition is prolonged for any length of time. With these nervous patients, the pulse rate will rise when you go into the room, but falls as you retire, or when she gets accustomed to your presence. Friends and relatives visiting the patient will often produce the same conditions. Therefore, a great deal of judgment should be exercised in allowing visitors to see a nervous patient.

## Paragraph 185

3. HEIGHT OF THE UTERUS: The tissue of the uterus itself, owing to the contraction and retraction caused by pregnancy and the termination of the confinement, is quite pale and anaemic. The muscular fibers of the uterus have been starved and hypertrophied during pregnancy and they now undergo fatty degeneration and atrophy to the size of ordinary muscular fibers. At least six weeks is required, in normal cases, for the uterus to regain its normal size, and at that time it should be just a little larger than the original virgin uterus. Generally at the end of the two weeks, the time the patient is leaving her bed, the uterus should be once more in the pelvis.

The rate that this degenerative process takes place varies greatly in different cases, and it is immaterial as to how high the uterus should be on any given day. It is necessary to know that the process is gradual, that the uterus becomes smaller each day, and that it should be massaged gently during the patient's daily morning care. You will note if there is a sudden dropping, or any rapid change of the position of the uterus, such as backward, or forward, and report the same to the physician.

## Paragraph 186

4. THE PERINEUM: The perineum and parts should be kept clean by sponging them off thoroughly twice a day with lysol solution and in case there are any stitches, the parts should be irrigated with lysol solution (one teaspoonful of lysol to the quart of sterile water) by pouring it

out of a pitcher after every time the kidneys act. In sponging off the parts, which should be done twice a day, or as often as soiled, the strokes should always be down in the direction of the rectum, so as to prevent any discharge from coming in contact with the perineum or adjoining parts. This refers to external cleanliness only. Douches are not required, nor allowed, in normal cases, either before or after labor.

## Paragraph 187

5. THE LOCHIA: The discharge, or lochia from the vagina, is the fluid that oozes principally from the placental site, where it is attached to the uterine wall. Some of it, also, comes from the walls of the uterus and from laceration of the cervix, vagina, or perineum. For the first three or four days, this discharge is largely bloody, and from the fourth to the seventh day it becomes white, and it should practically stop at the end of two weeks.

## Paragraph 188

Now, as the uterus is returning to its normal size by the process just mentioned, the important point for you to notice is the gradual change in the character and amount of discharge from day to day, rather than the exact nature on any particular day. So you see there is a gradual change taking place in the uterus, as well as in the appearance and composition of the flow.

## Paragraph 189

The lochia, or discharge, at all times, in normal cases is free from any pathogenic germs and has a peculiar odor, but not what we term foetid. You, as a nurse, will look for blood clots and pieces of membrane in the lochia and when present it should be recorded and same reported to the attending physician. The perineal pads should be changed as often as soiled.

## Paragraph 190

6. THE BREASTS: The breasts, and nipples having had the proper care during pregnancy are

in normal condition for the infant to nurse. The first three days, the breasts contain a yellow fluid called colostrum. The milk does not appear until about the third or fourth day. The nipples should be cleansed with a sterile saturated solution of boracic acid, using a sponge or absorbent cotton, and they should be wiped off thoroughly before the baby nurses, as well as afterwards. This should be done regardless of any treatment given to the nipples. The nipples should be kept scrupulously clean.

## Paragraph 191

Before the infant is put to the breast for the first time, the breast and nipples should be rendered aseptic. After the mother has had a good rest—say six to eight hours after delivery—you will prepare the breasts for nursing. Wash them gently, but thoroughly, with tincture green soap and water, then with bichloride solution 1-4000, which is allowed to dry in; then wash off with alcohol, and lastly with sterile boracic acid solution. Place over each nipple a piece of sterile gauze, which is held in place by a loose breast binder, just tight enough to keep the breasts from sagging. In a short time after this the baby is put to the breast.

## Paragraph 192

Before and after each nursing, the nipple is washed with a sterile saturated solution of boracic acid poured fresh from a bottle and not kept in an open glass. It is best to apply the solution freely, using sterile gauze sponges. Do not let your unsterilized fingers come in contact with the nipple. If you use sterile cotton sponges in place of gauze, you must be careful not to touch the cotton sponge on any part that comes in contact with the nipple. Do not use gauze or cotton sponges a second time. At the first indication of a sore nipple, wash off the nipple after each nursing as usual with boracic acid and apply alcohol freely, then dry the nipple and apply castor oil and bismuth subnitrate, equal parts.

## Paragraph 193

If the nipples should crack and become sore, they should receive special attention. Often the nipple shield must be used to prevent the child from irritating the nipple each time it nurses. Often all that is necessary is to apply equal parts of castor oil and bismuth subnitrate. If this does not affect a cure, apply, after each nursing, tincture of benzoin compound to the nipple, using a camel's hair brush, wash them off with 95% alcohol each time before applying the bezoin compound. If the cracks in the nipples become deep and are slow to heal, they generally become quite painful and it is necessary to heal them up as rapidly as possible. If the deep cracks are touched up with a 4% solution of nitrate of silver, using an applicator, it will hasten matters. If these cracks are allowed to remain open for any length of time, there is danger of infection getting into the breasts and causing serious trouble, as this is the avenue in which breast infection takes place. It is a good plan to clean the cracks out and disinfect them with alcohol before applying the silver solution; see that they are perfectly dry before using the nitrate of silver.

#### Paragraph 194

Babies should nurse first one breast and then the other. Before the baby nurses, after applying medication of any kind, on account of sore nipples, let us repeat that they should be washed, before and after nursing, with the boracic acid solution. When the breasts become filled with milk and become engorged, they should be bandaged and held in position by a properly applied bandage. The best bandage to use is the 'Boston Lying-in Bandage.'' You will be personally instructed how to apply this bandage. It is done in the following manner:

#### Paragraph 195

Take a towel, or anything suitable like muslin, and fold it so that it is about six or eight inches wide. Put it around the patient, next to the skin, and fold in the ends so that the folded edge comes within an inch and a half of the nipple when

the breast is well lifted up on the chest. Now, take another piece of muslin about nine inches wide and long enough so that when it is doubled it will extend over several inches from one end of the binder to the other. Now, fold it lengthwise in three equal layers, and again fold this narrow strip in the middle so as to form a V. The straight edge under the V is placed even with one end of the wide binder and securely pinned, including all layers of the binder, as well as the narrow strips and the point of the V. Now, bring the narrow strips across the chest, one below the breast and one above. Have the patient, or an assistant, hold the breasts while you pin the two strips to the end of the wide bandage, make them form a V and pin the same as at the folded end. A safety pin can be used to hold the narrow strips between the breasts. Suspenders can be used to hold up the narrow strips; cross the straps in the back before pinning them to the wide binder that reaches from one breast to the other. This bandage is very effective. It does not cover up the nipple and keeps the breast in an upright and natural position and exerts pressure equally in all directions and does not need to be removed or changed when the baby nurses. The wide binder at the back and the narrow strips in front can be pinned to the abdominal binder. This keeps both the breast bandage and abdominal binder in the correct positions.

## Paragraph 196

ENGORGED BREASTS. If the engorged breast becomes filled with milk to the point of distress, the badange should be applied, as directed, and as a rule, if left alone, the simple engorgement will gradually disappear and the nursing is not interfered with. When the engorgement is intense, with an excessive amount of milk, give one ounce of saturated solution of Epsom Salts each morning. Allow very little liquids by mouth. Put the breast at rest by applying the binder, and lengthen the periods between nursings. If the pain is severe, apply ice bags, or hot packs of boracic acid solution may be used. The use of the breast pump and massage is not to be recommended except in extreme cases. Many condemn the use of

the breast pump, as it stimulates the activity of the breasts. Neither the breast pump or massage should be used if there is any inflammation present.

## Paragraph 197

It is quite an art to scientifically and effectively massage a breast, without causing any bad after effects, and you will have personal instructions in your hospital practice with actual cases to work on. We want you to become experts in the care of the breasts.

If it becomes necessary for you to massage them you will first sterilize your hands and anoint the breast with sterile olive oil. The first motion is one of even compression of the whole breast. Both hands are spread out as evenly and smoothly as possible over the breast and firm compression is exerted against the chest, holding the breast, as it were, in the palms of the hands.

## Paragraph 198

The blood and lymph are thus pressed out and away from the gland. On removing the fingers, one may see depressions in the surface. This pressure is not painful, but to the contrary. After this even pressure has been practiced for a few minutes and all the glands covered, gentle circular strokes are made with four fingers of the right hand from the nipple towards the chest to the periphery of the gland. The four fingers make a complete circle as they pass down along the side of the breast to its edge, pressing harder as they go away from the nipple. The breast is steadied by the other hand.

After circling the breast two or three times. the third motion is applied. The one hand steadies the breast, while four fingers of the other hand wipe the breast from below upwards towards the nipple. This will cause the milk to flow out of the nipple if any is formed. If at any time the massage becomes too painful, compress the breast as directed at first, which will relieve the pain. When the breasts are properly massaged, the patient will feel much relieved, and this will be true if no milk comes out of the nipple. After massaging, the breasts should be bandaged smoothly and tightly.

## Paragraph 199

CAKED BREAST is an altogether different condition, and should not be massaged, but the binder should be put on tight and should hold the breast in position firmly, yet gently. So the treatment of the caked breast, we might say, is to leave it alone, because as a general rule manipulation only makes bad matters worse. Of course, your physician will give special instructions for you to follow, both when the breast is engorged or caked.

Aside from the engorged, caked breasts and sore nipple there are other conditions regarding the care of the breasts and milk supply, which we will consider at this time.

#### Paragraph 200

DRYING UP THE MILK. Suppose it is necessary to dry up the milk on account of death of the infant at term, premature birth, still born, or in cases where the milk does not agree with the infant, the following is the quickest and simplest way to stop the milk secretion:

Restrict all liquids as much as possible from the diet and give each morning two or three teaspoonfuls of Abbott's Saline laxative dissolved in half a glass of water, or any saline cathartic in small doses, like Epsom Salts or Citrate of Magnesia. Apply a firm breast binder, not the Boston Lying-in bandage but one that covers the entire breast, and then the breasts are left absolutely alone. The use of the breast pump or massage is not to be recommended because it only stimulates the glands to further action. Drugs are of no value. If we wish to dry up the milk at the time of weaning the baby and they become engorged or caked, we give the same treatment as we do for engorged or caked breasts that occurs at the beginning of nursing.

## Paragraph 201

CONTINUOUS FLOWING OF THE MILK SECRETION. In some cases we find there is a secretion from the breasts occurring irrespective of nursing and persisting after nursing. It is called Galactorrhea. It is a very rare condition and the causes are not

well known. It occurs more frequently in nervous women. One or both breasts may be affected and the flowing may be intermittent. It may follow abortions or full-term labors; the flow may be very slight or very profuse and may continue for some time. Cases are recorded to have lasted for years. It affects the general health of the patient. When this condition exists the breast binder may be applied, and often when menstruation is absent and returns, the milk secretions generally stop. Such conditions should be reported to the attending physician, as the flowing may be caused by an inflamed portion of the breast that would need surgical attention.

## Paragraph 202

ABNORMAL MILK. Abnormal milk we would term as milk of the mother which is normal in quantity and quality, yet does not agree with the child. It seems to act as an intestinal irritant and deaths have been reported as a result of an infant nursing such milk. It is generally found in nervous women and the higher classes. The child will refuse the breast, will vomit the undigested milk, which is often accompanied with diarrhoea and sometimes fever. Strange as it may seem, sometimes the child will refuse one breast and accept the other. When you have a case of this kind where the baby is very fretful, does not sleep well, and the milk does not seem to agree with the child, causing a distended abdomen, colic with green, acrid stools, you should discontinue the nursing for 38 to 48 hours and feed the child on a substitute of modified cow's milk or barley water and irrigate the bowels once a day with normal saline solution. Empty the breasts regularly with the breast-pump and at the end of two days another trial is made of the mother's milk. For the first few nursings do not allow the infant to nurse too freely, give part barley water. If the milk again causes intestinal disturbances to the child, then a wet nurse must be secured, or it must be given artificial feeding, that is, modified cow's milk. It must be remembered that illness of the mother affects the milk, causing diarrhoea and often convulsions and even death of the infant.

## Paragraph 203

LACK OF MILK. One of the most common complaints of nursing mothers, you will find, is scarcity or lack of milk, and when this exists we call it Agalactia.

The causes of deficient milk secretion are general weakness or ill health of the mother, malformations or diseases of the nipples, lack of proper stimulation of the breasts by weak infants—women with the first child after thirty-five are seldom able to nourish the infant—starvation and wasting diseases will affect the normal amount of milk. Worry, fright, pain and anger will temporarily stop the flow of milk, lack of love for the child may reduce the amount.

## Paragraph 204

A large breast does not mean a good supply of milk, small breasts with thin skin usually give plenty of milk, and when there is a lack of milk supply we first notice the distress of the childits loss in weight, there is pain in the breasts and absence of secretion, the child being unsatisfied with the nipple. It may nurse for a short time but finding nothing there it will refuse it and cry. We do not massage the breasts in the same way to increase the milk as we do when the breasts are engorged. To increase the milk we wish to stimulate the glands. This is done by raising the whole breast from the chest-wall and working it gently between the fingers. Care should be taken not to bruise the delicate organ, as an abscess may result. The gland is then held against one hand, while the tips of the outspread fingers of the other hand make circular movements all around its periphery. The best stimulant for the secretion of milk is the nursing of a vigorous infant. Cool baths and general massage with coarse towels are beneficial.

## Paragraph 205

7. THE BOWELS. During the lying-in period, patients are generally troubled more or less with constipation. On the morning of the third day give your patient an ounce or an ounce and a half of castor oil. This is best given in orange juice.

Take the juice of half an orange, place it in a glass and see that the sides of the glass are thoroughly moistened with the orange juice, and then pour the oil in the center, not allowing it to touch the sides of the glass; then put a little orange juice on top and this makes it very palatable. A little bicarbonate of soda may be added to the orange juice, if so desired, before the oil is poured into the glass to make it more palatable. When the bowels are ready to move from the effect of the oil, an enema should be given.

## Paragraph 206

When necessary to keep the bowels regular after taking the oil, give the patient one or two teaspoonfuls of Kasagra each evening, or, in place of Kasagra, give one-half to one ounce of Phillip's Milk of Magnesia (either one will do), and if they do not move regularly each morning, an enema should be given.

You will find that castor oil, Kasagra or milk of magnesia, given to the mother, rarely has any effect on the child. In normal cases, where you have no complications, there is no objection; in fact, we recommend letting your patient get out of bed and use the slop jar during the movement of the bowels, especially after the third day, that is, when the bowels move after giving the oil. The bowels can be emptied much better in this way, and it has a tendency to assist the uterus in expelling any clots, if the same should be present. Care should be taken to see that the slop jar is perfectly clean. Before using, better wash the top off with a bichloride solution, 1-2000, then you will be sure of no infection.

## Paragraph 207

8. THE URINE: If the patient does not urinate within ten to twelve hours after confinement, she should be catheterized and the bladder emptied. Once is generally sufficient, but the bladder must be emptied at least twice in the twenty-four hours, and it is better to have it emptied three times, or every eight hours. Avoid using the catheter as much as possible, for there is danger of infection and a

woman is liable to get the catheter habit. Sometimes a patient must be catheterized during the entire lying-in period, but such cases are rare.

## Paragraph 208

You must be very careful not to let the urine accumulate and distend the bladder. If such occurs, you will feel a tumor forming in the lower part of the abdomen. This you must always watch for, because it would lead to the paralysis of the bladder wall, and often to chronic inflammation of the bladder. Remember this, that when your patient is continually urinating, a little at a time, that the bladder is becoming filled with urine and should receive attention and should be catheterized, as the bladder should not be allowed to become distended.

## Paragraph 209

Before the catheter is resorted to, try the following:

- 1. Place the patient on a bed pan containing steaming hot water and leave her alone.
- 2. Allow water to run in wash stand, if it is in the same room.
- 3. Lay a large pad, dripping with warm sterile water over the pubis.
- 4. Place a hot sterile fomentation over the bladder.
- 5. Give very warm enema of normal saline solution.
- 6. Gentle pressure on the bladder may start the flow.
- 7. Let the patient sit up on the pan, this being less dangerous than catheterization.

Remember that many persons cannot urinate in the presence of another.

#### Paragraph 210

If the bladder must be catheterized, you must be very careful in your work, so as to not cause any inflammation of the bladder, as is often the case. In order to be on the safe side, it will be wiser to

have the attending physician do it himself the first time. It is your duty to notify the physician that your patient cannot urinate before you do anything, and you should get instructions direct from him.

## Paragraph 211

To catheterize a patient you will place her on a clean bed pan under good light, having first sterilized a soft rubber catheter No. 7. Make up a small amount of bichloride solution 1-3000 and a lysol solution, one teaspoonful to the quart. Sterilize your hands and sponge the vulva generously with bichloride solution, then with the lysol. Wipe out the mouth of the urethra with a cotton applicator, after having dipped it into the lysol solution. With the urethral opening in full sight the catheter (after being first lubricated with sterile glycerine) is gently passed into the bladder and the urine collected in a clean vessel for inspection. If the catheter should enter the vagina, as it is liable to do on account of the bruised and swollen condition of the parts, another catheter should be used, or the first one re-sterilized.

## Paragraph 212

9. DIET: Immediately after labor a patient not only needs sleep but nourishment as well; some patients will prefer hot liquids, while others will enjoy cold drinks like buttermilk or iced tea. Iced champagne is a good stimulant, and frequently allays gastric irritation quicker than any other medication. Raw milk with lime water is also indicated. Various meat broths are to be recommended.

## Paragraph 213

The first two or three days, until the bowels move, the diet should be very light. Soup, broth, milk, toast, tea, and coffee (not too strong), and crackers should constitute the food given during this time. After the bowels have acted freely from the effect of the oil, you can give your patient with safety a regular diet, and she may have almost anything she can digest, such as rice and barley in soups, cereal foods, steaks and chops after the fifth day, eggs, chicken, squab, light

puddings, blanc mange, baked apple, jellies, fresh vegetables, ice cream in summer, and stewed fruits, such as dried prunes, apples and pears. Serve three meals a day. Give a glass of milk at 10 A.M. At three in the afternoon, give a cup of chocolate, or egg nog. After the last nursing at 10:00 o'clock, or midnight, give a glass of hot milk or malted milk. If malted milk is objected to, the following is very palatable.

Malted milk—2 teaspoonfuls; Powdered chocolate (not cocoa)—1 teaspoonful; Cream—5 teaspoonfuls; Hot water—2/3 of a cup.

## Paragraph 214

For the morning nourishment at 10 in the morning or at 3 in the afternoon a wine glass or two of Imperial wine will be of great value, especially if there is a scanty flow of milk. The wine can also be given with meals. The liquids mentioned to be given between meals can be omitted in many cases, as they will not be required or desired by the patient.

## Paragraph 215

If the breasts are engorged, do not give any liquids, or restrict them to only a small amount.

Your patient should not be allowed to eat so much that it will give her dyspepsia, as no patient in bed without exercise can properly consume the same amount of food as when up and around. When a patient eats too much it will cause headaches and gas and the patient becomes languid.

## Paragraph 216

The patient should take a great deal of time in eating and should masticate the food thoroughly. It is not so much what she eats as the way she eats it. Give her plenty of fluids with her meals, and it is a good plan to give her a glass of water early in the morning before breakfast and another glass at bedtime. Throughout the puerperium see that the patient drinks pure water freely.

After the second week, when the patient is up and about, a general and more liberal diet is allowed.

Let us, while we are speaking about the diet, during the lying-in period, also include the diet during the entire nursing period.

## Paragraph 217

To regulate the diet of a nursing mother requires more or less attention. We must take into consideration a woman's former habits, and be governed by them in prescribing her diet.

In selecting a diet for a nursing mother it is well to give that which somewhat harmonizes with what the woman has been accustomed to before her confinement.

## Paragraph 218

Fischer, in his late work, gives the following menu for breakfast, lunch and dinner:

## BREAKFAST, 7 to 8 A.M.

Hominy and milk, farnia and milk, rice and milk, oatmeal and milk, germea and milk, cream of wheat and milk, some stewed prunes figs or peaches, stewed apples, oranges, grapes, soft-boiled eggs, eggs on toast, poached eggs, coffee and milk, toast and butter, stale bread (2 days old) with butter.

## Paragraph 219

LUNCH, at Noonday, 12 to 1 P. M.

Some soup made from meat, either beef, veal, mutton, lamb or chicken, containing also some rice, barley, farnia, sage or hominy; it should not be too highly seasoned, and should not be strained.

Fish, boiled or fried, and all shell fish, particularly oysters, are very nutritious during the nursing period.

If the appetite warrants it, then a piece of steak or chop, roast beef, chicken (white meat only) or raw chopped meat, with bread and butter, is very nutritious.

## Paragraph 220

DINNER or EVENING MEAL, 6 to 7 P.M.

A bowl of oatmeal gruel, stewed oysters, a drink of milk, farnia pudding, rice pudding, corn-

starch pudding, junket, cup of tea, eggs and meat, if in the habit of eating it in the evening.

Now from this menu, such foods can be ordered that will satisfy your patient's likings, but it must be remembered that there are certain foods that should be avoided, and not included in the menu, such as onions, garlic, cabbage, cauliflower, candies, too much sweets, large quantities of potatoes, butter and fat only moderately, and rich salad dressings with oils, highly seasoned dishes, spiced sauces, pickles, etc. They all affect the milk ,imparting to it a bad taste, and at the same time causing the baby to have the colic.

## Paragraph 221

While there are certain foods a woman should not eat while nursing a baby, there are also certain drugs that she should not take, like rhubarb, senna castor-oil, Rochelle and Epsom salts, arsenic, iodine, bismuth, iron, mercury, salicylic acid, iodides and bromides, as well as opium and morphine. All these will affect the infant when taken by a nursing mother. Neither should we give cocaine, chloral, atropine, digitalis, antipyrin and hyoscyamus. All have a very bad effect, and are rarely, if ever, prescribed to a nursing mother.

## Paragraph 222

patient has been put to bed, the first thing that she needs is rest and a good sleep. Often the first night after the confinement, she may not rest well, but the following night, or day, she should sleep, if possible, without a hypnotic. Remember that a patient who does not sleep presents serious complications, because the absence of sleep is the fore-runner of puerperal insanity or a symptom of infection. Remember that the lying-in patient must have sleep and rest, especially at night; therefore, it is a wise precaution to take the baby out of the room at night so that the mother can have her needed rest.

## Paragraph 223

After the confinement, the patient should go

no longer than twenty-four hours without sleep. At the end of this time, if your patient has had no real good rest, or sleep, give her from 7 to 10 grains of veronal. It is the best hypnotic we have for this class of cases, as it leaves very little, if any, after effects. So remember the importance of immediate sleep and rest after the confinement, and you will see that your patient gets this needed sleep and rest. If the baby annoys the mother during the day, do not keep it in the same room. You should make a record of the number of hours your patient sleeps and report the same to the physician.

## Paragraph 224

11. THE ROOM: Both mother and infant require fresh air. The windows should be kept open night and day, and impure air should not be allowed to accumulate in the room. The temperature of the room should remain the same night and day as nearly as possible. The room should be cheery and refreshing. There is no reason for having the blinds down, excepting when your patient wishes to sleep. She is not to be treated too much as an invalid.

## Paragraph 225

each day her daily care. Give her a sponge bath, change the bed linen, arrange her toilet in general, and make her comfortable for the day. At this time you will knead the uterus; note how it is contracting, change the abdominal binder, adjust the breast binder, and examine the nipple. The best time to fix up your patient is just after the nine o'clock nursing. Then after you give her nourishment at 10 A.M., she can have a nap.

#### Paragraph 226

13. VISITORS: The patient may see her near relatives, if her case has been normal and she is not nervous. The husband and near relatives are the only ones who should be allowed in the lying-in room during the first three days. Keep other visitors and relatives out, and it is a good plan not to allow too many visitors at any time. Do not allow

anyone to handle or take up the baby, and do not allow it to be handed from one to the other, or be kissed by friends and relatives.

## Paragraph 227

14. AFTER PAINS: Some women suffer more or less with after pains, and they are often caused by clots forming in the uterus. Massage of the uterus will often cause them to be expelled. When the after pains are so severe that the patient cannot rest, it is necessary to give something in order that your patient may secure the required sleep. Codine, in half grain doses, given every three or four hours for two or three doses, will generally control the pain. Give as few doses as possible. Sometimes it may be necessary to administer a hypodermic of morphine from 1/8 to 1/4 grain doses. One dose will generally be sufficient, and if clots in the uterus are the cause of the after pains, the administration of 20 to 30 drops of the fluid extract of ergot every 3 or 4 hours during the day is advisable. No drugs should be given unless prescribed or ordered by the attending physician, but do not allow your patient to suffer beyond reason; notify your physician at once.

## Paragraph 228

15. WHEN CAN THE PATIENT GET UP? The patient should remain in bed until the uterus has become a pelvic organ and the lochia has ceased or is very light, that is, between the tenth or fourteenth day. When the patient first sits up, if the discharge becomes red, it is better that she be given another day or two in bed. There is no necessity for a woman staying in bed longer than two weeks, unless there is some abnormal condition. As above stated, patients may sit up after the third day, to use the bed chamber or slop jar, but at no other time. She may leave her house and go out after she has been up a week or so, provided there are no bearing down pains and no pains in the back, and the lochia has completely stopped.

## Paragraph 229

16. POSITION OF PATIENT: The muscular tone of all parturient women is often deficient after

childbirth, and the condition is increased by a prolonged stay in bed. Therefore, it is advisable in all cases that an effort be made to exercise the different groups of muscles throughout the lying-in period, so if a woman moves around a great deal in bed and moves her arms, abdominal muscles and legs, and partly sits up, it is not to be discouraged, but rather encouraged. Pleasant fatigue is wholesome, but exhaustion is harmful and should be avoided. Therefore, do not allow your patient to exercise to the point of becoming over-tired. Do not allow a normal patient to lie on her back very long at one time. Have her change positions often. If you should keep your patient on her back during the two weeks in bed she would get up with a posterior displacement of the uterus and the chances are never be well without an operation.

Now, ladies, if you will care for your patient as we have instructed you, we are sure you will not meet with any criticisms as an obstetrical nurse.

# PAINLESS CHILDBIRTH Paragraph 230

In discussing this important subject, we want to give the mother a clear understanding of what is meant by "Painless Childbirth," and that it is her right as a woman to demand relief from the pains caused by childbirth.

It is the duty of the physician to relieve her of these pains in the same spirit that he relieves other suffering, because if labor is purely a physicial process it should be as free from pain as other physical processes.

#### Paragraph 231

Women have been taught to believe that the pain during labor is a natural consequence, and that they must be reconciled to endure it, and the joy of motherhood has caused them to bear it. This is no reason, or proof, why women should suffer during labor, because the pain causes shock, and this shock is far more dangerous to the patient than the proper use of modern methods now employed to relieve the pain.

## Paragraph 232

So it is the duty of every physician and every maternity hospital to employ the safest and best methods to render childbirth free from pain and surgical shock. Physicians must learn to be more than midwives if they are going to give obstetrical cases the very best and up-to-date treatment. A surgeon, to qualify himself, spends years of study in anatomy and operative work on the cadaver, in order to become proficient, and yet few, if any surgical operations are more difficult than a complicated obstetrical case; and the surgical case requires no greater skill and no less experience than does the obstetrical case, because two lives, in place of one, are often in the balance.

## Paragraph 233

In recent years, the mode of living and dress that has been the custom of the American woman has rendered her physically weak to endure a long, tiresome and painful labor. Higher civilization and artifical refinement makes it necessary for the obstetrician, as well as the surgeon, to guard his patient from the dangers that accompany excessive and prolonged suffering.

The surgeon does not permit his patient to suffer during an operation, nor afterwards. He prevents surgical shock to the best of his ability. We get the same surgical shock during labor, which causes complications and delays rapid recovery. Now, if the surgeon takes this precaution, why not the physician, or institution that cares for confinement cases, use such measures that will make childbirth practically free from pain and surgical shock.

As a general rule, a physician allows most women, who are in labor for several hours, to remain unaided and endure considerable and often very severe pain and, as stated, women think they must suffer this pain; that there is no relief for them, so she is reconciled to endure it and suffer the consequences.

## Paragraph 234

Now there is no logical reason why women

should suffer during labor. Every maternity hospital should be thoroughly equipped with all modern appliances, and have specially trained attendants, in order to give obstetrical cases the proper care, rendering confinement a pleasure and safety, also insure perfect health in the future.

## Paragraph 235

We know that the specialist on internal medicine, the surgeon, and the general practitioner send their patients to the general hospital—why? Because the medical treatment and surgical care as received in these institutions, experience shows, is much better than can be received at home. That is, the prognosis is better, and for the same reason, that the mother may have the care she rightly deserves, she should be sent to an institution especially equipped for such cases.

When she has a tumor to be removed she is sent to the hospital for an operation. If she has pneumonia, typhoid fever, or gastric ulcer, she is sent to the hospital—why? Because it betters her chances for life and health. But think of it; the crowning glory of her life—motherhood—there is little or no attention given to her. She is allowed to suffer in ignorance as to her confinement and future health. Therefore, the great mass of women are delivered at home, and many of them are still confined by ignorant, and too often filthy midwives. Especially is this true in the larger cities. On account of the conditions existing, there has been no decrease in obstetrical mortality and future health in cases confined at home.

## Paragraph 236

Let us quote verbatim from Dr. Davis in his work on 'Painless Childbirth,' page 57. He says: 'It is a disgrace to the medical profession that after carefully investigating the midwife problem for the American Medical Association, Professor J. W. Williams was forced to say: 'Ordinary practitioners lose proportionately as many women from puerperal infections as do midwives.' And 'More deaths occur each year from operations improperly performed by practitioners than from infection in

the hands of midwives.' Williams urges: 'Education of the laity that poorly trained doctors are dangerous, that most of the ills of women result from poor obstetrics, and that poor women in fairly well conducted free hospitals usually receive better care than well-to-do women in their own homes; that the remedy lies in their own hands and that competent obstetricians will be forthcoming as soon as they are demanded. ' It is a disgrace to the hospital boards that while they are providing so many beautiful hospitals with thousands of beds for the medical and surgical treatment of men, women, and children, they have only a few beds for maternity cases. It reflects on their financial judgment to give so many free beds for the medical and surgical treatment of conditions which proper obstetrical care would have prevented."

## Paragraph 237

We often wonder if the mothers are going to continue to suffer from unnecessary ills, due to childbirth, in silence, and will the husbands continue to bear the burdens that are associated with invalidism of the wife. We say: Are husbands going of bear these burdens forever and make no effort to secure safer obstetrics? Are mothers, who are more or less invalids, due to poorly managed obstetrical cases, going to allow their daughters to go through the same ordeal, and allow them to endure the same unnecessary suffering through life?

Painless childbirth is so important, yet it is only one of the many necessary problems that go to make up perfection in obstetrics.

## Paragraph 238

The time is at hand when the mother and wife of today must give more time and thought to protect herself by demanding the best scientific care during pregnancy and confinement, and not spend so much time at the clubs and political activities, and as she becomes educated to demand this service, she will no longer dread the ordeal of confinement. She will save herself untold suffering, and will do the world a great good by practically eliminating race suicide.

## Paragraph 239

Dr. Davis says: 'Let them learn that obstetrical accidents will sometimes happen in the hands of the most skilled, but that the large percentage of bad results are due to ignorance and lack of surgical cleanliness; that most of the ills following childbirth are due to poor obstetrics and are unnecessary, and they will then demand the same skilled care in childbirth that they demand when they undergo a surgical operation.' The competent physician must use such methods that will be safe for both mother and child.

While in recent years great progress has been made in preventive medicine and surgery, at the same time there has been no attention given to secure safety for the mother during her confinement. The high mortality that exists today, in maternity cases, should stimulate the reader to demand better and safer obstetrics. If we render childbirth painless and prevent surgical shock, with our present knowledge of asceptic surgery, there is not a strictly obstetrical complication, which can beset a woman, that cannot be successfully managed.

## Paragraph 240

So we say, the obstetrician who has an accurate knowledge of obstetrics, painless child-birth and the technic of antiseptic surgery, should attend and manage a confinement case in the proper manner, and not leave his patient an invalid the rest of her life. As soon as the laity, both husband and wife, are taught to realize this fact, we will not have long to wait to clear away the dark cloud of inefficiency which hangs over us today in obstetrical practice.

## Paragraph 241

Let us give, in some detail, the methods used in relieving the pain and surgical shock of labor, and the technic of administering them. We have at our command, chloroform, ether, twilight sleep (which is morphine and scopolamin), and nitrous oxid-oxygen.

## Paragraph 242

We mention chloroform, morphine and sco-

polamin simply to condemn them—the two safest being ether and nitrous oxide—because statistics show that the ratio of deaths that occur, caused by the administration of the above, for the relief of pain during confinement, one case in every 223 dies from the use of scopolamin and morphine; one in 3000 from chloroform; one in 30,000 from ether, and one in 500,000 from nitrous-oxide. So it is not difficult to decide upon the choice of the proper preparation to administer to the maternity case in order to render the birth painless.

## Paragraph 243

When childbirth is rendered painless, it reduces the time of confinement about 25 per cent. The woman does not become exhausted, therefore giving better uterine contractions. It costs from 50c to \$1.00 an hour to administer the necessary amount of anaesthetic to produce the required results.

## Paragraph 244

The husband may say, "Why add this extra expense to a confinement case?" Let us argue in this way—Suppose \$5.00 or \$10.00 is added to a confinement case, or even \$20.00, and have the case properly cared for, with no pain or shock and free from after effects, isn't this better than to have the wife suffer ill health from the results of a poorly managed confinement case, often requiring an operation, which means hospital and surgeon's fee. And add to this the expense of domestic help. Now we ask—Where is the saving?

#### Paragraph 245

You would pay from \$150.00 to \$250.00 for an operation for appendicitis, and think nothing of it; therefore, why not pay a reasonable fee for the wife's confinement? It requires as much surgical skill to confine a woman, and do it properly, as it does to perform an operation for appendicitis, and the former requires hours of a physician's time, while the latter only minutes.

There is no argument, either from a financial standpoint or for the patient's safety, against the administration of anaesthetics that will render childbirth painless.

## Paragraph 246

It is not a difficult matter to have the necessary amount of funds on hand to meet the required expense in a confinement case. There is nine months time for the accumulation of the required amount. Say the wife sets aside \$10.00 a month from the time of conception until her confinement, she will have \$90.00 to meet such an expense. This will insure her the best of care, which will guarantee her good health in the future, and at the same time she will enjoy a painless childbirth.



## PART II

Contains everything relative to the general care of the infant during the first year, including the feeding, both breast and artificial.



# CARE AND FEEDING OF INFANT DURING FIRST YEAR



Paragraph 247

Before we direct our attention to the first care of the new born infant, let us first see what effect labor has on the child's organism. After we understand such effects, we can take care of the child with more intelligence.

#### Paragraph 248

The child at birth, and during the first two weeks, undergoes the most violent and fundamental changes. Many children (about three to five per cent) cannot survive the shock of even normal labors; others die in the first few weeks of life because of their inability to overcome and meet the adverse conditions surrounding their lives. The effect of labor on the child's organism is very severe and this explains to you why a child dies immediately after delivery, or in a short time without any apparent cause.

#### Paragraph 249

Uterine contraction during labor has more or less effect upon the fetal circulation. During the beginning of labor pains the fetal heart beats

fast, at the extreme height of the pain it is slow, and as the pains cease it beats fast again. These changes are more marked with very strong pains, especially after the membranes have ruptured. As the head advances and when it passes through the pelvic floor, the fetal heart beats are usually very slow; sometimes it has been counted as low as 60. We mention these facts to show you that labor has a marked effect upon the fetal circulation.

#### Paragraph 250

There are also changes that take place in the blood during labor; that is, the gradual deoxidation and hypercarbonization of the blood, which causes the respiratory centers to respond to irritation. The child in the uterus is in the condition of apnea, but when the child's head is born and the placenta begins to separate, and when the baby is delivered with the placenta almost completely detached, the result is, the child passes from a condition of apnea to one of dyspnea, and the external stimulation that occurs irritates the nerve centers, and respiration begins.

#### Paragraph 251

When natural causes are not sufficient to start the infant's breathing, it often responds promptly to artificial external stimulation, such as the sprinkling of cold water, and slapping the back and buttocks. This stimulation causes contraction of the muscles of respiration and the fetus gasps, and whatever lies near its mouth is sucked into the lungs. This is the reason why the mouth should be freed from all mucous immediately after the delivery of the head. Care should also be taken that nothing comes in contact with the child's mouth in the way of liquor amnii, blood ,or vaginal mucous, thus preventing it from entering into the lungs. As the loss of oxygen is great and the amount of carbon dioxide increases at the same time, the respiratory centers may be paralyzed and the fetus may die without making any attempt to breathe.

#### Paragraph 252

This brings us to the first care of the new born infant. Remember how we instructed you to

place the baby in the basket when handed to you by the physician. You now realize how essential it is to keep the baby warm in order to reduce the shock, and and how important it is to give the baby special attention and care the first few days of life.

## Paragraph 253

When you are ready to give the baby its special attention, take it from the basket into a warm room, or nursery, keeping it wrapped in its original blanket and lay it on a table previously covered with a warm blanket. Then proceed to care for the baby as follows:

Examine the baby thoroughly and see if it is normal in every way. Examine the cord and see that there is no hemorrhage and that the cord is properly tied. Note the size and length of the new born baby—the average length should be about 20 inches. Examine every part of the body for any abnormal condition.

# Paragraph 254

CARE OF THE EYES: After you have thoroughly examined the baby you will next care for the eyes by putting in each eye (using a medicine dropper) one or two drops of 1% solution of nitrate of silver and wash it out with normal saline solution, using a medicine dropper, the same as for the silver solution. Have two medicine droppersone for each solution. If there is a history of the mother having had gonorrhea, do not use the saline solution after the nitrate. nitrate of silver may cause a membrane and discharge to form in the eye when used alone, especially is this true when a 2% of nitrate is used as some doctors recommend. This inflammation cleans up in a day or two. In place of the nitrate of silver, some physicians use 20% solution of argyrol, then no saline is used. But we prefer the use of 1% silver nitrate and follow it with the normal saline solution. Normal saline solution is made by putting one teaspoonful of common table salt to a pint of water, or in that proportion. It should be sterilized before using. The 1% silver solution is obtained from any druggist.

## Paragraph 255

CARE OF THE SKIN: Next render the skin clean by using warm sterile olive oil. Apply the oil freely all over the body, including the scalp. Use cotton applicators for cleaning the nostrils and ears with the oil. Do not insert the applicator into the external opening of the ear, that is, do not allow any oil to enter the ear. Remove the oil and caseosa with a soft cloth, or cotton. Be very gentle and careful not to irritate the skin. If it does not clean easily, apply more oil, wrap up the baby in its blanket, replace it in its basket and let it remain for an hour or two when the skin can be properly cleaned. Caseosa is the greasy, whitish substance, which covers the skin of the new born infant.

## Paragraph 256

After the oil has been removed, you will next dress the cord. Wash off the stump and adjoining skin with 95% alcohol, using a cotton applicator, or sponge, then dry it thoroughly and keep it perfectly dry. Wrap a piece of gauze around the cord and put a gauze pad over it and apply the binder. A piece of flannel is best to use for a binder, and it should be pinned or sewed on reasonably tight, but not so tight as to interfere with the child's breathing. The binder is removed each day and the cord examined. Remove the gauze around the cord when soiled. Treat the cord as a surgical wound. Next put on the shirt and napkin, or diaper.

## Paragraph 257

As we are instructing you about the care of the baby's skin let us turn our attention to the normal condition of the skin of a healthy new born infant. At first it is red, but gradually fades as the baby grows older, and from the fourth to the seventh day, the skin often has a yellow tinge. This yellow color is often taken for jaundice, but it is only a condition of venous congestion of the liver, and unless the whites of the eyes are yellow, jaundice can be ruled out. After two or three weeks the skin attains a rosy pink when the baby is warm, and a pale blue color when the baby is

cold. The cheeks and palms of the hand are usually a deeper shade of red than the rest of the body.

# Paragraph 258

After cleaning the baby's skin as directed, and having it partly dressed, you will next wrap the baby up in a warm blanket and place it back in the baskets on its right side, with the foot of the basket still elevated about five or six inches. Put in the basket a hot water bottle, not too hot, but warm. Let the baby remain there until it is time to put it to the breast. Examine it often to see if there is any hemorrhage from the cord. An infant should cry occasionally and you should see that it does cry.

## Paragraph 259

For the next six or eight hours divide your attention between the mother and the child. See that the mother has the needed rest, give her a hot drink of weak tea, malted milk, chocolate, or coffee, that is not too strong, and try to have her sleep, and as mentioned, see that the baby cries occasionally. It might be well at this time to consider the baby's cry in general, but first let us discuss the application of the napkin.

#### Paragraph 260

THE NAPKIN: We will first consider the size and material of the napkins to be used. It is well to note that during the first month of life they should be made of cheese cloth and after that they should be made of the regular cotton napkin material. They should be oblong and folded square—about 36 inches long and 18 inches wide. When they are folded in the center you will have a napkin that is 18 inches square. You will then fold it again into a triangle.

#### Paragraph 261

As the baby grows older, you will require 20 inch square napkins. Five dozen are usually required and they should be washed each time they become soiled. Rinse the napkins well after washing, so that all the soap or chemicals which might

be used in washing are thoroughly removed. It saves washing and protects the tender skin to put a small amount of absorbent cotton inside the napkin. The cotton can be used the first two weeks.

#### Paragraph 262

To apply the napkin after it has been properly folded turn it down along the smooth and folded edge for a distance of two inches and lay the baby upon the napkin. Bring the opposite points and the front half of the lower point together and hold them with one hand. Fold them together and bring them down between the baby's leg. Now take the other half of the lower part and bring it up between the baby's legs and pin them together. You will note that the top of the napkin at the back is still turned over for about two inches. This part that has been turned over is now turned up smoothly. This brings the napkin up higher in the back and does away with any gap. It is well to put on a second napkin to serve as a protector. As soon as the baby's napkin is damp it must be changed.

## Paragraph 263

When the napkins are removed, they should be placed to soak in a covered napkin pail. This pail should be kept in a laundry, or any suitable place, and not in the nursery.

#### Paragraph 264

At this point, let me say: Never wash the buttocks off with warm water. Always use a damp soft cloth and use cold water. After the parts are thoroughly dried, dust on equal parts of powdered starch and stearate of zinc.

#### Paragraph 265

You can generally dispense with a napkin after the child is two years of age. We will consider this fully when speaking about the care of the baby's bowels.

#### Paragraph 266

You may use your own pleasure in regard to the dressing of the baby; do it any time before the

first nursing. We will now take up the baby's cry in detail:

# Paragraph 267

THE BABY'S CRY: In discussing the baby's cry and all conditions relative to it, and to teach you how to understand its meaning, will be our aim at this time. You will find this to be very important, and we want you to become thoroughly familiar with this subject and we want you to remember everything we are going to say about the baby's cry.

#### Paragraph 268

You will note how beneficial is the first cry the baby utters. It is our duty to make it cry as soon as possible, in order to clear the mucous from its throat and windpipe, expand the baby's lungs which have never breathed before, and to send the blood to the extremities.

Dr. Kilmer has given a very complete outline on this subject, and we will quote him practically verbatim: When an infant is a few hours old and has never had its first crying spell, and you notice that the infant is keeping extremely quiet, examine it and you will find the feet and hands feel cold. The chances are it is not breathing regularly. When this condition exists, make the child cry. In order to cause the baby to cry, lay it on its stomach and put the palm of your left hand on its abdomen and spank it gently on its buttocks with the palm of your right hand. Slap it in this way from three to ten times and it will almost invariably begin to cry. After this crying spell, you will notice that its hands and feet get warm and its breathing becomes much better. You will find it very difficult at times to teach mothers the value of making or letting the baby cry, but if you will explain the reason why this is done, and how it benefits the haby, they will see its necessity.

#### Paragraph 269

The conditions that will cause a baby to cry are as follows:

1st-It is hungry.

2nd-It is thirsty.

3rd-It is in pain.

4th—It wants attention.

5th—It is sleepy.

6th-Its napkins are wet.

7th-It is tired of lying in one position.

8th—It is frightened.

9th—It is exhausted.

11th-Its clothing is uncomfortable.

#### Paragraph 270

lst. WHEN HUNGRY. The cry of hunger is a continuous one, accompanied by sucking of the fingers or thumb, and the cry stops immediately when the baby gets its food.

# Paragraph 271

2nd. WHEN THIRSTY. Usually this cry is continuous, but stops when baby is given water.

#### Paragraph 272

3rd. WHEN IN PAIN. It is in pain from a pin prick, or any cause, when its crying is sharp and continuous. If from colic, the cry may be spasmodic, accompanied by drawing up of the knees and turning the thumbs inside the closed fingers. The child frequently cries on account of pain.

#### Paragraph 273

WHEN THE CHILD WANTS ATTENTION. Baby very soon finds out that it likes attention. When it is laid down and you leave it and go out of its sight, it sets up a cry for renewed attention. It wants to be cuddled or rocked. If it does not get just what it wants it will cry. Its cry will immediately stop when you take it up or rock it. In other words, it is rapidly becoming a spoiled baby and the day a baby is born is the time to begin to train it. You can spoil the baby in a day or so, so that it requires a great deal of time to rectify your mistake. Relatives and loving mothers say, "Oh! Don't let him cry, take him up. He will grow out of it and when he talks and understands it will be all right.'' If you do this and wait a few months, you are lost. Teach the infant that you mean what you say. You are the one to be obeyed, and it is for the child's good that it is taught to obey.

## Paragraph 274

Now the treatment for the baby who cries simply because it wants attention is what? What would you do? You must let it have its cry out, and the hardest trial for a young mother is to hear her baby cry and not give in, but do it she must if she is desirous of the best for her baby. A little selfdenial on the part of the mother at this time may prevent a great deal of suffering for the child in after years. If it learns the lessons of selfrestraint and self-control at this time, there will be no time when it will be so easy to train it as from the very beginning. If you let the baby alone and it finds that no matter how hard it cries no one seems to care, it will stop crying. Often, one good cry is all that is necessary. If a baby is not born with a rupture and it wears a good supporting abdominal band, there is absolutely no danger.

## Paragraph 275

5th. WHEN SLEEPY. Babies will often fight against going to sleep. They will cry loudly at first, but finally the cries become weaker, and with a little moan or sigh baby is asleep. When it is time for baby to sleep put it in its basket and see that it goes to sleep. Do not take it up because it cries.

#### Paragraph 276

6th. WHEN THE NAPKINS ARE WET. When baby cries, always examine the napkins and change them if they are damp or soiled.

#### Paragraph 277

7th. BABY GETS TIRED OF LYING IN ONE POSITION. Very young babies, and also weak babies, are unable to change their position themselves. In such cases, if you will change their position and lay them on the other side, it will often stop their crying. This is also true of any baby that seems to be restless without any apparent cause.

#### Paragraph 278

8th. WHEN FRIGHTENED. Babies from six months to two years old will often become frightened to find themselves in a dark room, or after a bad dream, and they will cry out in a shrieking voice.

They should be taken up in a soothing way and, as soon as the crying is over, they should be placed back in bed again. This is generally sufficient to quiet them. They may also do this when they come in contact with strangers.

## Paragraph 279

9th. WHEN EXHAUSTED. A cry from this cause will be usually a low, moaning cry and occurs in very ill or weak babies.

## Paragraph 280

10th. WHEN CRYING FROM TEMPER. This form of temper is seen in older children. They cry loudly, swing their arms and kick their feet. Tears are supposed to be seen in babies crying from pain, but if you will notice you will often see real tears from nothing but temper. Tears do not usually show themselves until after the baby is from one and one-half to three months old.

# Paragraph 281

11th. UNCOMFORTABLE CLOTHING. Often baby's bands, or napkins, become uncomfortable and hurt it. Take it up and straighten out its clothing, and it will often stop crying if this is the cause.

Young infants cry quite frequently, and it is healthful to let them cry. It is a part of their daily exercise and is beneficial to their general development. When you have a baby who cries a great deal, go over the list given here and enumerate every one, and if it is not crying from any cause except it "Wants Attention," let it have its cry out.

# Paragraph 282

DRESSING THE BABY: Now we will direct our attention to finish the dressing of the infant. Use such clothing as the mother has prepared. It has its band and napkins on; now put on its shirt, a Gertrude petticoat, which is best, a flannel night gown, etc. It is best to use a pinning blanket for the first six weeks. It keeps the body and feet warm. Keep a small blanket around the baby at all times.

#### Paragraph 283

Dress the infant before you take it into the mother to nurse (which is 6 to 8 hours after the birth) if the mother's condition is normal.

## Paragraph 284

Before putting the baby to the breast, wash out the infant's mouth again with absorbent cotton, wet with saturated solution of boracic acid. The absorbent cotton is wound around the little fingertip, after being well saturated with the solution, the finger is then inserted in the baby's mouth and the whole inside of the cavity is gently wiped out. The baby's mouth should be thoroughly cleansed in this manner at least once a day. Some contend that this should be done before and after each nursing, either from the breast or bottle, but if the nipples and breast are kept perfectly sterile, as directed, and the bottle and nipples are thoroughly sterilized, we question if it is necessary to irritate the mucous membrane of the mouth, as it naturally would be from so frequent washing. If you wash the baby's mouth out once a day, and do it well, that will be sufficient.

## Paragraph 285

There is a general daily routine and care to give the infant, together with proper watching and management. You must learn how to properly give the baby its bath and care for the eyes, mouth and cord. See that it gets the required amount of sleep, and take a record of the rectal temperature daily. See that the baby gets the proper amount of food, in regard to time and amount, whether it is breast or artificial feeding. Weigh the baby daily in order to ascertain the gain it is making. See that the bowels and kidneys are acting properly. See that it has plenty of fresh air, that it is properly clothed and that it is properly covered, but not too much, as it will perspire when asleep.

# Paragraph 286

CARE OF THE CORD: You have been instructed how to dress the cord the first time, and the dressings should be changed when they become soiled. The cord generally separates and drops off within two weeks, either by dry or moist gangrene; the former is preferable, and for that reason we try and keep it dry. If the dressing is dislodged, or becomes wet, it should be soaked off with a bichloride solu-

tion 1-2000, and the stump should be washed with 95% alcohol and a new gauze dressing applied. We do not use dusting powders unless there are signs of moist gangrene, then a powder of 1 part of salicylic acid to 20 parts of starch (sterilized) is applied after thoroughly cleansing the parts with alcohol. Generally moist gangrene, or any infection that may develop around the stump, can be cured by applying a wet dressing of 50% alcohol for six or eight hours. Remember that during all these dressings you must have your hands properly sterilized if they come in contact with the cord. If the hands are not sterilized, you must use sterile cotton applicators. After the cord comes off, if the stump does not heal readily, and there is a discharge (often slightly bloody), take an applicator and clean out the navel thoroughly with 95% alcohol and then dust on stearate of zinc and it will soon heal.

## Paragraph 287

CARE OF THE EYES: In normal cases it is not necessary to put any medicine in the eyes after the first treatment. When giving the bath, wash the eyelids off with saturated solution of boracic acid; also clean the mouth thoroughly at the same time, as directed.

#### Paragraph 288

CARE OF THE NOSE AND EARS: Apply olive oil daily for the first two or three months with sterile cotton applicators, and wipe out the nostrils, also the folds around and about the ears, remembering not to let any oil get inside the ears.

#### Paragraph 289

CARE OF THE NAILS. It is necessary to keep the finger and toe nails in proper condition, Trim the finger nails with a manicure scissors level with the finger tips, and at the same time remove all the hang nails, which should be cut off close to the skin. Keep the finger nails clean with a soft nail brush.

Toe nails should be trimmed straight across with a pair of straight scissors. Do not round the corners, but let the edge of the nail grow out over the toe, and this will prevent ingrowing toe nails.

## Paragraph 290

CARE OF THE SCALP. The head should be washed daily during the first six months with warm water and pure Castile soap. A soft wash-cloth should be used. After the infant is six months old, continue the daily washing with warm water but do not use so much soap. After the baby is two years old soap should be used only once a week. Care should be taken not to use too much friction and irritation in washing the scalp, as there is danger of injuring the skin. All the soap must be removed. This is done with a very fine soft sponge dipped in warm water. Both the sponge and wash-cloth must be well washed out and thoroughly dried in the air before using them for the next treatment. The sponge and wash-cloth used for cleansing the scalp should not be used for any other purpose. To prevent the accumulation of dandruff, or little scales that so often form on the scalp, you will occasionally apply a little white vaseline or olive oil well rubbed into the scalp.

# Paragraph 291

PRICKLY HEAT. Oftentimes, especially in hot weather, babies have a little fine red rash which is very irritating, and makes them quite fretful. The bran bath is very beneficial for this condition, and it is made by putting one pint of bran into a muslin bag and immersed in warm water until thoroughly soaked; then the bran bag is well squeezed out in the bath water until it becomes quite milky. The temperature should be that of the warm bath. Keep the baby in it from two to six minutes. No friction of the skin is necessary, and after the bath the baby is dried with a soft towel.

#### Paragraph 292

AN INFANT'S WEIGHT: The baby's weight is an important factor in connection with the care of the infant, and great attention should be given to it, instead of being neglected as it so often is, especially from birth and during the first year. To estimate the progress the infant is making, gain in weight is valuable, but we must not, of course, rely wholly upon the development of the child as

regards weight; and because a baby is not gaining weight according to fixed rules, is no evidence that the quantity of food should be increased, as statistics show that such an error will cause more deaths than bacteria and hot weather combined.

# Paragraph 293

At birth the average normal infant should weigh from 6 to 8 pounds. A baby girl 6 to 7 pounds; a boy 7 to 8 pounds. There is generally an initial loss of weight that occurs the first few days. Generally the lowest mark is reached on the third to the fifth day, after which time the baby begins to gain and normally reaches the original weight on the tenth to the fifteenth day. The total loss is from six to eight ounces, but the variation may be from two ounces to one pound. When there is a greater loss in weight than one pound, especially in a small infant, it should be regarded as pathological and the condition should be carefully investigated and reported to the physicion in order that he may determine the cause. A fat baby is more likely to lose weight than a thin one.

#### Paragraph 294

Great losses in thin babies are more likely to indicate some pathological condition. Just why babies lose, we cannot say positively. Perhaps the child does not receive sufficient food for the first few days of life, which may have something to do with this condition. Another possible conclusion is the one advanced by Rott—it is a loss of water, and is probably due to the fact that these babies received very little fluid in any form. We believe babies lose less and receive less shock when care is taken not to tie the cord until pulsation ceases. By doing this infants receive from the mother one to two ounces of blood. This extra blood the child needs in its first few days of life.

## Paragraph 295

Babies increase in weight more rapidly in the first half than in the second half of the first year. The gain the first six months should be from six to eight ounces a week. From the sixth to the twelfth month, the gain should not be more than from two to

three ounces a week, so the first year the gain is about a pound a month, or twelve pounds gain since birth. These weights refer to normal breast-fed infants.

## Paragraph 296

The question of normal weight from birth with artificial feeding is an open one. To feed a child from birth artificially and have it gain steadily, and keep it free from gastro-intestinal disturbances, is much more uncommon than we naturally suppose. In artificial feeding, we do not pay so much attention to the increase in weight as we do to keeping the gastro-intestinal tract in a healthy and normal condition.

#### Paragraph 297

If we have a steady gain of four ounces a week during the whole of the first year, that is the best we can hope to secure in an artificially fed infant, and this only when all other conditions are normal. If a gain should be as high as eight ounces a week, which is an excessive gain, we must expect it to be followed by a catastrophe of some kind. In other words, look for trouble ahead.

#### Paragraph 298

So you see how important is the correct and careful record of baby's weight from the time of birth to the end of the first year. Many mothers and nurses neglect to keep this record. A knowledge of the correct weight of a baby-whether it is losing or gaining—is one of the most essential features in the care of an infant. Many mothers when asked whether baby is losing or gaining weight will reply: "I do not know, he feels lighter (or heavier) than he did a week ago.'' Now, we do not want to know whether an infant FEELS lighter or heavier, but what we want to know is the exact weight of the baby. A correct daily record is absolutely necessary. An infant should be weighed every day (at the same time each day) for the first three months of life. Then if conditions are normal, it should be weighed weekly, say every Monday, for the next three months, and then every two weeks until one year old.

## Paragraph 299

A regular gain is an ideal one. If a baby is fed entirely upon starchy, or some of the prepared foods, a great and sudden gain in weight will be the result, but that child will not be as strong physically as the baby who has had a milk diet (either breast or artificial) with a slow but steady gain in weight. It is a good plan to provide yourself with a weight-chart, upon which a proper record of baby's weight can be kept. A good chart for this purpose is the one devised by Dr. Walter Lester Carr. Our Hospital record is of the same plan. In fact, it is the same idea copied and arranged to meet our requirements.

Paragraph 300

TABLE OF AVERAGE WEIGHT DURING THE FIRST YEAR OF LIFE.

Month	Average	Weight
1	7 to	0 8½
2		10½
3		12½
4		13¾
5		143/4
6		15¾
7		16½
8		17
9		17½
10		18
11		18¾
12		20

It will be seen by this table that the infant's most rapid gain in weight is during the first three months of life. During the second year a child gains about five pounds.

#### Paragraph 301

WEIGHING THE BABY: The scales must be accurate. The family scales with a scoop may be used up to twenty-four pounds. A more expensive and delicate scale is the kind we have in the nursery. It is of special design, a very convenient and accurate basket scale for weighing infants. There are many good scales of this nature on the market.

When ready to weigh the baby, take a light

soft blanket, place it in the scale-pan, or basket, and adjust the scales so that they balance with the blanket in the basket. Now undress the baby, take everything off, including the napkin. After removing all clothing, wrap the baby up in the blanket referred to, and weigh it. The weight registered is the exact weight of the baby. Always balance the scales each time with the blanket in the scales basket before weighing the baby, and always weigh the baby as directed. A baby is usually weighed just before the bath.

## Paragraph 302

ACTION OF THE KIDNEYS: You will note from birth as to the frequency and amount of urine passed, and report it to the attending physician. Do not let a napkin dry and think the baby has not urinated, but if the baby does not urinate during the first 24 hours there is no reason to be alarmed, as long as there is no tumor formed in the region of the bladder above the pubes. If you are sure that the baby has not urinated, you will assist it by washing the orifice of the urethra with boracic acid solution, removing any smegma that may be present. Give the baby a teaspoonful of cold water and put it in a hot bath. Put your hand over the orifice of the urethra and you will feel the stream of urine, if any is passed. You can also put hot flannels over the bladder and carefully watch the napkins for the next few hours. Remember, there is no cause for anxiety if there is not a full bladder forming a tumor above the pubes, providing the infant does not urinate.

# Paragraph 303

If you cannot get the baby to urinate within 36 hours after birth, notify the attending physician, as it may be necessary that the baby be catheterized or examined to see if there is any abnormal condition present.

#### Paragraph 304

BATHING THE BABY: During the time the cord is coming off, we use but very little water on the baby's skin, giving only a sponge bath. The baby's hands, feet, face, neck and ears are gently washed,

using pure Castile soap and water, without applying too much friction. The rest of the body is gently sponged off, following with a warm olive oil rub. After the cord falls off, the baby should have its daily morning tub bath.

#### Paragraph 305

The bath should be given about an hour after the 9 o'clock feeding. Rubber bath tubs are to be recommended because the baby can splash and play as much as it desires without any danger of injuring itself by falling and striking the sides of the tub. Any metal bath tub of suitable size can be used, but it will require more care on your part.

## Paragraph 306

The temperature of the water should be from 98 to 100 degrees Fahrenheit for a young infant.

By the time the baby is a year old, the temperature should be as low as 90 degrees Fahrenheit. Always use a bath thermometer to test the temperature of the water. The temperature of the room in which the baby is bathed should be 70 degrees, at least.

#### Paragraph 307

Hold the baby entirely with your left hand while it is in the tub, and use the right hand for washing it. The child should remain in the tub for about three or four minutes. Lift the baby out of the tub by placing one hand under its buttocks and the other hand supporting its back and head, and lay it on its back on your lap, or on a table, with a soft warm towel under it. Have a flannel blanket under the towel. Roll it from side to side and pat it gently all over-do not rub. After the excess of water has been dried by the towel, pull the damp towel out and let it rest on the flannel blanket. Roll it up in this blanket and pat it once more until dry. Rub it thoroughly with your warm, dry, bare hand for half a minute or so. Sprinkle sterile talcum powder on the buttocks, in the creases in the thighs, and under the arms. You should put the binder on young infants, and this is generally worn until the baby is six to eight weeks

old. Finally put on the napkin and then its clothes. Well-kept babies need little, if any, dusting powder, but if the parts do become chafed, use sterile stearate of zinc.

## Paragraph 308

PULSE RATE: The pulse in a new-born is about 120 per minute, and remains well above 100 in the first year of life. The pulse rate should be taken only when the infant is quiet.

#### Paragraph 309

RESPIRATION: The respirations in an infant are from 25 to 30 per minute. Respirations should also be taken when the baby is quiet.

#### Paragraph 310

TEMPERATURE: It is very important to recognize that there is a distinct normal temperature variation for the infant, and that any variation above and below this means an abnormal condition. Temperature in the infant should be taken per rectum, and should register 98 6/10, the same as the normal temperature of the adult. Variations from the normal temperature in the infant should not be more than from 98 2/10 to 99. You will take the temperature each day while giving the baby its general morning care, for the first two weeks, after that it is not necessary unless some abnormal conditions develop.

## Paragraph 311

SLEEP. The healthy new-born infant usually sleeps most of the twenty-four hours, and the sleep is sound. During the third and fourth week, the sleep is less profound—the infant being more readily aroused—and the total number of sleeping hours is about twenty. As the infant grows older, it sleeps less and less, and at six months, the time spent in sleep is about sixteen hours, consisting of a twelve-hour night rest from 6 P.M. to 6 A.M., interrupted only by the late evening feeding, and of a two-hour morning nap and a two-hour afternoon nap. The twelve-hour night rest should be continued until the child is six years old, the day

naps being, of course, shortened. At the age of one year, a two-hour nap in the morning, and a one-hour nap in the afternoon is sufficient; while from the eighteenth month to the end of the second year, the morning nap may be omitted. An afternoon nap of one and a half to two hours should be continued until the child is six years old. The child must always be allowed to awaken of its own accord in the morning after its night's sleep.

## Paragraph 312

For the first two or three weeks after birth, the new-born infant should not sleep in the same room with its mother. Its cry will disturb her rest, which is so essential for the rapid recovery of her strength and nervous system.

## Paragraph 313

The most practical bed is a BABY'S BED. large basket on rollers; with it baby is moved from one room to another without disturbing it-such a basket should have no top or canopy. Put a hair mattress or pillow in the bottom of the basket; over this place a guilted pad covered with a cotton sheet. It is convenient to have a second quilted pad placed over the cotton sheet, and place the baby on this last pad. If it becomes wet or soiled, it is removed and the remainder of the bed is kept dry. The mattress or pillow is so arranged that the baby's head is slightly higher than its feet. Some infants require a small head pillow; others sleep better without it. Baby's bed should be provided with two thin and two thick flannel blankets. Do not cover a baby when asleep, just use enough bedding to keep it warm—a baby should not perspire while sleeping. Over the mattress spread a small rubber sheet, and have it large enough to protect the mattress, which comes directly under the baby's buttocks.

#### Paragraph 314

When the baby has grown out of its basket bed, it should sleep in its crib. The white enameled iron crib with sides that may be lowered at will, is the most satisfactory. Babies can sleep in these cribs for three or four years. The crib should have

high sides to prevent the baby from falling over the railing when it stands up. The crib should be placed beside the mother's bed. When the baby is a year and a half old, the crib can be placed in the nursery, and the baby left alone, especially at night, as the baby retires early and will not be disturbed by any other members of the family.

## Paragraph 315

Regularity and Training. -- It is important, from the very first, to train a baby to sleep at regular definite hours; otherwise the mother's life will become a burden to her. During infancy, the baby should be awakened punctually at the feeding hours in the day time, and thus be trained to sleep between feedings. It is unnecessary every time to lift the baby from its bed at night except to nurse it. The diaper can be changed, the feeding bottle given, and other needed attentions accomplished without lifting the baby. To walk the floor at night, or to be obliged to sit in the room, or to sing a baby to sleep is an uncalled for martyrdom. Unless the baby is sick, it should be put in bed at night and trained to stay there until morning. Never rock a well baby to sleep. Let it be taught from birth that when it is placed in its crib or bed, it is to go to sleep.

#### Paragraph 316

Disturbed Sleep.—With infants and children, undue excitement or romping games should not be indulged in for at least one hour before bedtime, because this is just the time above all others, when their little nervous system should be at rest; otherwise the child will sleep badly. Tossing in the sleep without awaking is due either to unsuitable food, indigestion, poor nutrition, previous excitement or serious illness.

#### Paragraph 317

Sleeping with Mouth Open.—This indicates some obstruction to the breathing, and is often due to abnormal growths called "adenoids," situated in the back of the nose at the junction with the throat. When a baby sleeps with open mouth,

a physician should always be consulted, since the obstruction to the breathing lowers the vitality, predisposes to cold in the head, and may even lead to deafness.

## Paragraph 318

Sleeping with the Mother.—An infant should never sleep in the same bed with its mother; even in the poorest families; the infant should have its own bed. Not only is there a possible danger of the mother rolling over on her baby and suffocating it—a danger which is real and not imaginary—but there is the temptation on the part of the mother to nurse her baby too often; moreover, the baby is liable to get the bed clothes over its head and become smothered, and in any event the health of the baby is unfavorably influenced, as it does not get enough air when sleeping with another person. It should always sleep alone.

## Paragraph 319

Sleeping Outdoors.—Unless the weather is stormy, the baby, after it is two or three weeks old, will derive much benefit and health from sleeping outdoors in the day time between 7 A. M. and 7 P. M. in the summer, and between 9 A. M. and 4 P. M. in winter. In the summer the baby may be placed in a baby carriage and kept in a shaded spot; in the winter—except when the weather is freezing—the baby may be well wrapped up, and placed in its carriage on a side porch.

#### Paragraph 320

The best time to air an infant is: In the Spring from 9 A. M. to 4 P. M. Summer from 7 A. M. to 6 P. M. Fall from 9 A. M. to 4 P. M. Winter from 9 A. M. to 3 P. M.

If you want to air the baby indoors after it is one month old, you will clothe it the same as for outdoors, put it in its carriage, open the windows, and allow it to be aired in this way for half an hour. On rainy and stormy days baby must have its airing indoors. When the days are very hot, keep the baby in the house between 11 and 2 each day.

#### Paragraph 321

FEEDING THE BABY: Now, to feed the infant in an intelligent way, it is necessary for you to know a few facts regarding the child. In the first place you should have some knowledge of the anatomy and physiology of the stomach found in childhood. You should also know something about food absorption, as well as the characteristics of the normal child.

## Paragraph 322

The average new-born baby's stomach holds, without distention, only about one to one and one-half ounces, or even less. If distended, in some cases it may hold two ounces. Now, one of the most frequent mistakes made in feeding the baby is to give it a greater quantity of food than can possibly be assimilated, and the result of this error is that it either vomits it or it passes through the bowels in an undigested condition.

## Paragraph 323

The stomach at birth is nearly a horseshoe in shape, with the convexity toward the left side, the whole completely covered anteriorally by the liver.

When the child is in an erect attitude the position of the stomach is changed, owing to the respiratory movements of the diaphragm. This explains why gas is expelled from the stomach when baby is held on your chest or shoulders and any slight friction applied to the child's back.

## Paragraph 324

As the child develops, the capacity of the stomach is a matter of much importance. While it cannot be determined with absolute accuracy, Holt states that at three months it holds about 4½ ounces, at six months, 6 ounces, and at one year, 9 ounces.

## Paragraph 325

The poor peristaltic action, and the small amount of elastic tissue present in the muscular walls of the intestines in the infant, is possibly the cause of so much constipation; the constipation accompanied with the accumulation of gas and distension, a condition we find so often in the infant.

The liver is relatively much larger in the infant than in the adult, and this may account for the fact that changing the position of the child often relieves the pressure on the stomach, and the child will become quiet when turned and placed on its right side. There is a condition that occurs in the liver of the infant known as venous stasis, which is probably due to the distended and tortuous condition of the bile capillaries which exists in the new born child, and this condition often accounts for the yellow condition of the skin which sometimes occurs in infancy, and is known as icterus neonatorum. It clears up in a few days and needs no treatment. Caster Oil which is generally given will do no good. Unless the whites of the eyes are yellow it is not a case of jaundice.

#### Paragraph 326

The physiology of the stomach should be of interest on account of its important relation to vomiting and to the length of the intervals between feeding. The motor activity of the stomach has been demonstrated that when we have a fluid in the stomach that is acid in reaction, it will cause the pylorus of the stomach to open, allowing its contents to pass into the small intestine, which is immediately attached to the stomach. It causes the stomach to remain closed. We think it was Canon who demonstrated this fact. Let us see what happens when milk is taken into the baby's stomach. First, it coagulates. After that, we have whey and curds in the stomach. The whey is acid and passes the pylorus first, together with any added sugars that may be present. The proteids require a longer time, because free acid must be present. Fatty acids and neutral fats are the last to pass, possibly not because they do not become acid, but because the fatty acids require a longer time to be neutralized by the intestinal juice, and hence the stomach remains closed on account of this acid condition; so you see that when we have a high fatty condition of the food there is delay in the passage of the stomach contents through the pylorus.

## Paragraph 327

The stomach is emptied much more quickly in the breast fed baby—the average being about two hours. Time varies with the amount taken. As to modified cow's milk, the same allowance must be made, but in the majority of cases the food leaves the stomach after about three hours. However, individual cases may vary greatly from the general rule.

# Paragraph 328

Carlson found that hunger waves appear in the stomach of the infant 2½ to 3 hours after the digestion of food. He states that they probably indicate that the stomach is ready to receive food, yet hunger waves do not always indicate the pressure of an empty stomach.

## Paragraph 329

The acidity of the gastric juices is due to several substances: that is, hydrochloric acid, lactric acid, fatty acids, and phosphoric acids, also the acid substances in human milk. Now free hydrochloric acids increases as digestion advances; therefore the longer intervals between feeding the more hydrochloric acid is present, which gives the gastric juices great power to destroy bacteria. Thus, from the action of hydrochloric acid, and other digestive substances, the casein in cow's milk is prevented from producing specific poisons in the infant organism.

## Paragraph 330

The pancreas of the new born infant contains all of the ferments found in the adult, only in much smaller quantities. The liver in the new born performs the same functions as it does in the adult. We must also remember that in the infant, the digestive organs must not only make good the body waste, but also supply tissue for the formation of the growth of the body, and at the times when the body growth is relatively much greater than at any subsequent period of life, we may readily account to a great extent for the frequent gastro-intestinal disturbances in the first and second years of life.

## Paragraph 331

The absorption of food stuffs by the infant has proven that the protein of cow's milk is as well taken care of as that of the human milk. The same can be said of the fats, and no material of the body is so valuable as the body fats. In the body of the new born the proportion of fat is greater than in the adult. It must be remembered that from 87 to 98% of the fat taken into the system is absorbed. The same can be said of the carbohydrates. Milk sugar probably requires a longer time to be absorbed than malt sugar, while cane sugar seems to be distinctly irritating to the intestines of the young infant. In severe nutritional disturbances some of the forms of sugar are generally found in the urine. When sugar is given in excess, it seems to favor a retention of water in the system, which is loosely combined, and is probably held in the subcutaneous tissue; and we find that children who have been overfed with sugar, especially in the form of some of the condensed milks, lose so rapidly when taken with any intestinal trouble, as to jeopardize their lives. This is explained by the loss of large quantities of water (in the form of a solution of salt, which is very loosely held in the tissues). Another important action of the sugar is the production of fever that generally occurs in elementary intoxication. Of recent years, there is being devoted a great deal of study to the various salts that are contained in food. Sodium and Potassium have been given the greatest attention and it is found that sodium promotes water retention, produces a rise in temperature, and increases the nervous irritability; while potassium produces only a temporary water retention, and rarely causes a rise in temperature. Animal foods are rich in Sodium; vegetable foods are rich in potassium. Of magnesium, little is known. Phosphorus in the organism is of great importance, first, because of its entrance into proteid muclei, and second, because of the phosphorus present in bone.

#### Paragraph 332

In regard to water retention, it has been discovered that there are three classes of cases;

first, those in which there was a decrease in weight when the food was concentrated and the weight increased only after the addition of water. Second: those where the weight remained the same on a concentrated food, and there was an increase after the addition of water. Third: those in which the addition of water made no difference, but which did well on a concentrated food.

## Paragraph 333

The feeding of the baby is a matter of great importance and often the most difficult of all questions that confronts the physician, nurse and mother who has the care and feeding of the child. Infant feeding is divided into two classes:

- 1. Breast-feeding.
- 2. Bottle-feeding.

## Paragraph 334

Fortunate is the child that belongs to the first class, because human milk gives the proper and ideal food for infants. No artificial food (no matter how careful its preparation) is equal to mother's milk, and statistics show that breast-fed babies, as a class, are larger and healthier than the bottle-fed ones, and that the mortality among them is far less, so from the standpoint of importance we will first consider breast-feeding.

## Paragraph 335

There is some difference of opinion regarding the time when the baby should be first put to the breast. To settle this question, we will treat the child like any other little new-born animal. The natural instinct of a baby is to suck—so let the infant nurse as soon as the mother has fully recovered from her confinement and feels rested. This generally requires from six to eight hours, in some cases twelve hours. After that put the baby to the breast every six hours until the secretion of milk becomes well established, which is about the third day.

#### Paragraph 336

This early nursing has four good effects:
1. It assures good uterine contraction.

- 2. The fluid (colostrum) that is secreted in the breast during the first three days acts as a cathartic upon the infant's bowels—it is human Castor Oil.
  - 3. It stimulates the secretion of milk.
- 4. It draws out the nipple and puts it in better shape for future nursing. It is easier to accomplish this, and properly develop the nipple, while the breast is still flaccid, than it is after it has become full and tense with the contained milk.

# Paragraph 337

As a rule, no feeding is necessary the first three days except what the baby obtains from the breasts, yet if the infant really seems to be ravenously hungry, as shown by the manner in which it grabs the nipple and persistently cries, give an ounce of moderately hot water (which has previously been boiled) two or three times in 24 hours. This will generally satisfy the child. The water may be sweetened by adding one teaspoonful of sugar of milk (Mercks) to eight ounces of water. If the infant will take the plain water, omit the sugar. Saccharine may be used; dissolve one tablet in 8 teaspoonfuls of water. Put one teaspoonful of this solution in one ounce of water. All other foods are unnecessary and often harmful.

# Paragraph 338

After the milk becomes well established, which is about the third day, as mentioned above, the child should nurse regularly every three hours during the day. The hours for feeding are as follows:

6 A. M., 9 A. M., 12 M., 3 P. M., 6 P. M., 10 P. M., 2 A. M. The two o'clock night feeding is omitted after the second week. You will notice the night feedings are four hours apart. This gives the baby's stomach more rest and does not disturb the mother's rest and sleep so often, as well as the child's—and this is true especially when the two o'clock morning feeding is omitted.

## Paragraph 339

If the baby is asleep when the hour for nursing comes, it should be awakened and fed. It is absolutely imperative to have the infant nurse regularly, as stated in the above schedule. Usually the child soon learns to waken of its own accord at the proper time. Regularity is the one important principle in infant feeding. Do not allow the baby to go to sleep at the breast with the nipple in its mouth; keep it awake while nursing. The time a baby should nurse at each feeding is from fifteen to twenty minutes. Do not allow the habit to be formed of nursing the child every time it cries, simply for the sake of quieting it.

# Paragraph 340

At the end of the second or third week, when the two o'clock feeding at night is omitted, and if baby wakes up and cries at this time, give it an ounce of warm water. Remember all babies should be given an ounce of water two or three times each day. (All water given the baby should be boiled and cooled). At all times, give the water in a Hygienic nursing bottle. This gets the baby in the habit of taking the rubber nipple and when it is time to wean the baby the task becomes an easy one.

#### Paragraph 341

Do not forget to wash out the baby's mouth once a day with a saturated solution of boracic acid. This should be done as long as the infant nurses. Also wash the nipples, before and after the baby nurses, with the same solution. It is very important.

#### Paragraph 342

If the baby has the colic during the first two or three months and cries a great deal, do not take up the baby every time it cries, and hold it. It is far better practice to change the baby's position; that is, turn it on the other side, give it a little hot water—oftentimes it is necessary to use a glycerine suppository, or give an enema (colon irrigation) to relieve the gas. To relieve gas from the stomach, when baby cries while nursing, or im-

mediately after, hold baby up on your chest and apply gentle friction to its back.

#### Paragraph 343

Position of Mother and Child for Nursing. When nursing from the left breast, the baby should be held on its right side with its head supported by the left arm of the mother. When nursing from the right breast, the position is, of course, reversed, and the child lies upon its left side. Sometimes in the latter position, baby will vomit while nursing on account of the pressure of the liver on the stomach. If this vomiting occurs, let the baby lie upon its right side with its legs tucked under the mother's right arm. While the mother is in bed, she should lie on her side or be propped up with a pillow. After she is sitting up, she should lean a little forward while nursing, so that the nipple will point downward toward the child's mouth. It will add greatly to the mother's comfort if she rests her foot upon a stool.

# Paragraph 344

Flow of the Milk. When the milk flows too freely and the child nurses too rapidly, the nipple should be withdrawn now and then to prevent its choking and to allow it to breathe, and at the same time restrain the rapid flow by passing the base of the nipple between the fingers and thumbs. Also hold the breast so as to keep it away from the baby's nose.

#### Paragraph 345

When the flow is not free enough, and it is difficult for the infant to obtain sufficient nourishment (especially with a delicate child) pressure of the hand on the breast will increase the flow of milk—nothing will do more to stimulate milk secretion and increase the flow than vigorous nursing by a strong, healthy child.

#### Paragraph 346

One breast is generally sufficient for one nursing and the other is reserved for the next feeding. At first the quantity of milk a mother secretes is about one pint in 24 hours. This amount

of milk secreted increases as it is demanded by the growth of the child.

## Paragraph 347

The flow of milk at first is generally more than the baby can digest. Nature prevents overfeeding (especially of strong babies) by the stomach rejecting an over supply. It comes up just as it went down. It is simply a spitting up, not a vomit, and milk so rejected does not have a very sour odor. When this occurs, and baby is healthy, the mother need not worry. She can correct this trouble by not allowing the baby to nurse so long.

## Paragraph 348

The Amount and Quality of Mother's Milk: When there is not a sufficient supply of milk to nourish the child, the question arises whether the amount can be increased. It will be necessary in such cases to give both breasts at a nursing; have the mother drink large quantities of liquids like milk and various milk foods. Have her partake freely of soups and other liquids. Beer is often good to increase the milk. There is a soft wine of different flavors made by the Imperial Non-Alcoholic Wine Company, of Seattle, Washington, that is very effective in increasing mother's milk and it not only increases the quantity, but also seems to increase the quality of the milk. Now, suppose we are successful in increasing the amount of milk-are we increasing the nourishment for the child in a like ratio? Increasing the amount of milk does not necessarily increase its nourishing power. Therefore, the quantity of milk secreted may be larger, yet it may be more watery and the actual amount of nourishment in 24 hours may be just the same as before-so the quality of the milk must be known. In all cases, frequent chemical analysis of the milk is imperative. The mother's milk should show an analysis practically as follows: that is for all practical purposes, we may say mother's milk contains:

#### Paragraph 349

Specific	gravity	1020	to	1033
Reaction		Alkal	ine	

Fats	4%
Proteids	2%
Sugar	6%
Bacteria	Absent
Water	88%

Supposing now, that we have some defect in the amount or quality of the breast milk; can this be corrected before subjecting the baby to the trials of artificial feeding? While we cannot always be positive of results, we do know that the kind and amount of food given the nursing mother, her habits of living, and frequency of nursing the baby, exert a powerful influence upon the composition of the milk. This is accomplished as follows:

#### Paragraph 350

RULES FOR MODIFYING BREAST-MILK (RATCH)

TO INCREASE THE TOTAL AMOUNT OF MILK:

Increase the liquids in the diet and give soft non-alcoholic wines.

## Paragraph 351

TO DECREASE THE TOTAL AMOUNT OF MILK:

Decrease the liquids in the diet.

## Paragraph 352

TO INCREASE THE TOTAL SOLIDS:

Shorten nursing intervals; decrease exercise; and decrease the liquids in the diet.

#### Paragraph 353

TO DECREASE THE TOTAL SOLIDS:

Lengthen the nursing intervals, increase exercise, and increase the liquids in the diet.

#### Paragraph 354

TO INCREASE THE FAT:

Increase the meat in the diet.

#### Paragraph 355

TO DECREASE THE FAT:

Decrease the meat in the diet.

Paragraph 356

TO INCREASE THE PROTEIDS:

Decrease the diet.

#### Paragraph 357

TO DECREASE THE PROTEIDS:

Increase the exercise to the point of fatigue.

# Paragraph 358

By the term "Total solids," we mean the total amount of FAT, PROTEIDS, SUGAR, and SALT.

Every mother nursing her child should have the proper diet of digestible and nutritious foods and regular exercise. She should avoid late hours, and should be free from all worry, anxiety and nervous excitement. Her digestion must be in the very best condition. Regularity should govern the time for meals. She should eat slowly, masticate the food thoroughly, and keep the bowels regular.

It is not so much what a nursing mother eats, as it is the way she eats it, and how perfectly it is digested, because indigestion in the mother invariably causes indigestion in the child. True, such articles of diet as onions, turnips, cauliflower and cabbage, with their distinct odors and tastes, may impart an unpleasant taste to the mother's milk. In like manner, certain drugs taken by the mother will enter the milk and effect the child. No drugs should be taken by a nursing mother only as prescribed by a physician. You will remember we discussed the subject of the nursing mother's diet, and the taking of medicine by her, when considering her care after the confinement.

A physician may treat a child in this way, yet the mother should be free from all anxiety regarding the effect on the baby of any medicine that may be prescribed by her physician.

Now, let it be remembered that a nursing mother with perfect digestion, can eat nearly everything digestible without fear of affecting the baby.

# Paragraph 359

THE WET NURSE: If, by any reason, the amount and quality of the mother's milk is deficient, and the fault cannot be corrected, she does not necessarily have to wean the baby and resort to artificial feeding, since she may employ a wet nurse with gratifying results.

## Paragraph 360

In delicate children, or in cases where artificial food does not agree, remarkable gains will often quickly follow the employment of a wet nurse. In fact, in many cases it is the baby's only chance for life. Now, the choice of a wet nurse is a matter of great importance, and the physician in charge should be consulted. The wet nurse should be a woman of good health, strong, and not too fat. Her blood should be examined to eliminate syphilis. An examination of the wet nurses' own baby is a guide to the health of the mother and to the nutrient value of her milk. Her age should be between twenty and thirty years. The age of her baby should be as near the age of the one she nurses as possible—it is to some advantage if her own baby is a few weeks the older. Her breasts should be firm and contain plenty of milk. If possible, the wet nurse should only nurse her foster infant, because few women have enough for both, and a mother will naturally give the preference to her own child.

# Paragraph 361

She should be a woman of good moral character, amiable, temperate and should have a sense of the responsibility of her position. A married woman is to be preferred—yet there is no objection to an unmarried woman, providing it is her first baby. It is only the neglect of a wet nurse, and not her moral vices, which affects her foster child. For the same reason, the color of the nurse is a matter of no consequence whatever. Rules regulating the wet nurse's health are the same as those for a nursing mother. There are great difficulties in obtaining a good wet nurse, and, no matter how well qualified she may seem, a wise mother will not hand over the care of her baby entirely to the nurse, but will exercise a careful supervision over everything that goes on, particularly at night.

This brings us to the next subject of infant feeding—that of artificial feeding, and let us say to you that artificial feeding of infants will be the most perplexing and difficult problem in all your work relative to the care of children. It pre-

sents itself for the combined effort and study of physician, nurse, and mother.

#### Paragraph 362

ARTIFICIAL FEEDING OF INFANTS: In the feeding of infants with artificial foods, modified cow's milk is considered the best. True, various infant foods are on the market and all have some value, but cow's milk is by all means the most important, and, for that reason, we shall consider the use of cow's milk very thoroughly.

## Paragraph 363

Selecting the Milk for Infant Feeding: In selecting good cow's milk, two important factors exist:

- 1. Cleanliness.
- 2. The health of the herd.

The best milk for infants is herd milk, and not from one cow. Jersey milk is not to be recommended at all on account of being too rich in fats and the delicate constitution of the breed, which predisposes them to tuberculosis. Therefore, every cow furnishing milk for infant feeding should be tested for tuberculosis. Possibly, this is a hard law to enforce, but every precaution possible should be taken in this direction.

## Paragraph 364

The stable in which cows are kept should be located on high ground and it should be well ventilated and clean, and the cows themselves should be kept clean, and the udders well washed before each milking. The cow's food should never consist of brewery refuse, etc. The attendant, or milker should be healthy and free from all infectious diseases, and he should keep himself scrupulously clean and should wash his hands before each milking—such precautions can be taken by any reasonable, intelligent, individual, and will add greatly to the cleanliness of the milk.

#### Paragraph 365

The milk should be collected in containers that have been sterilized and immediately, if pos-

sible, packed in ice, then sealed and kept in this condition until delivered.

A great factor in securing a pure milk for infants' use is the period of time which elapses between milking and delivery. The shorter the period, the cleaner the milk when it is ready for use. The number of bacteria per cubic centimeter should not be over twenty to thirty thousand, preferably not over ten thousand.

## Paragraph 366

The milk should be free from all and any preservations, and must not contain any pathogenic micro-organisms. It must contain the various constituents in required amounts.

# Paragraph 367

Let us note the difference between cow's milk and human milk. Cow's milk contains two or three times as much proteid as human milk. Therefore, cow's milk would have four to six per cent proteid and it occurs in two forms.

## Paragraph 368

CASEIN AND SOLUABLE PROTEID—Soluable proteid is the most easily digested of all forms of albumin, and it is present in a greater amount in human milk than in cow's milk.

The casein in cow's milk is not coagulated by heat, but is thrown down in the form of curds by acid or rennin.

Cows milk contains about 1% more of total solids than human milk.

#### Paragraph 369

Sugar occurs as lactose in both, but in human milk it is two or three times more abundant than in cow's milk, so in cow's milk we would only have about two per cent sugar.

The amount of fat is about the same, but human milk contains a greater proportion of fat with a low melting point, and, therefore, it is easier to digest.

## Paragraph 370

Human milk is alkaline in reaction and quite sterile, free from bacteria. Now cow's milk is acid in reaction, caused by the bacteria it contains. Cow's milk often contains two hundred million bacteria per c. c. Under the most up to date aseptic conditions this may be limited to twelve thousand bacteria per c. c.

# Paragraph 371

The approximate analysis of cow's milk is as follows:

Specific Gravity About	1030
Reaction	acid
Fat	4%
Proteids	3.5%
Sugar	4%
Bacteria	present
Water	. 86 to 87%

From the above you will note the composition of cow's milk as compared with breast milk—there is quite a difference. The fats, sugar and proteids in cow's milk are about the same—say, 4%. So to modify cow's milk and make it like human milk, we must do two things: add more sugar and take out proteids. We supply the sugar in the form of sugar of milk, cane sugar, or the malt foods, and we take out the excessive proteids, or curd in the milk, by diluting cow's milk with water.

#### Paragraph 372

It is a fact that newly born animals are poorly supplied with such elements as to enable them to repel germ invasion, or to assimilate food. Experience teaches that in the infant this is an exception, that the same condition does not exist because the colostrum and early milk have the power of exciting a beneficial reaction in the infant's tissue. Therefore it is very important in all cases, to have the baby nurse, if only for a few days, before artificial feeding is commenced. Now, the question confronts us, how can we modify cow's milk so that it will have the same amount of fat, proteids, and sugar as contained in human milk?

This is not so difficult when we know the ex-

act composition of each. We know that there is two or three times as much proteid in cow's milk as in human milk. We know that the fat is about the same, and that human milk contains two or three times as much sugar as the cow's milk. That the curd in the cow's milk is much larger and occurs in harder masses than in the human milk, and we learn from experience that barley water mechanically divides up the curd of cow's milk. We also know that citrate of soda, one grain to every ounce of milk, or the use of lime water or bicarbonate of soda in the place of barley water, makes the curd softer and helps to prevent their formation and renders it more like human milk. We also know that cow's milk contains bacteria which gives it an acid reaction, and we know that the human milk is alkaline and free from bacteria. We also know that the fresher the cow's milk is, the weaker the acid reaction, and the less bacteria present. We also know that many of the bacteria contained in cow's milk can be destroyed by having the milk pasteurized or sterilized, thus rendering it fit for infant feeding.

#### Paragraph 373

From this knowledge let us formulate a mixture that will represent human milk as near as possible, and a mixture that will be the most convenient and easy to make up. One that can be used if necessary from birth, when the child has not received any breast feeding.

Whole Milk	1½	Ounces.
Cream (15%)	1	, ,
Lime water	1/2	, ,
Sugar of milk water	1½	, ,
Citrate of soda	3	Grains.
What does this mixture contain	in?	

FIRST: 1½ ounces of whole milk, and what we mean by whole milk is the contents of the bottle of milk after it is thoroughly mixed.

SECOND: 1 ounce of cream which contains 15% fat. This cream is taken from the regular bottle of milk, and not from the one used for whole milk.

THIRD: % ounce of lime water. It is used as

mentioned to break up the curds in the cow's milk, and help to dilute the proteids.

FOURTH: 1½ ounces of sugar of milk water. Sugar of milk can be obtained from any druggist, and to make the solution, put three ounces of sugar of milk to a pint of hot water. It should be placed in a bottle, well corked, after it has been pasteurized for 10 minutes. It should be made fresh every day.

FIFTH: Citrate of soda. The citrate of soda is used to break up the curds, and render the milk less acid.

#### Paragraph 374

Barley water may be used as a substitute for lime water in the above formula, and it is made by using I level teaspoonful of Robinson's prepared barley flour to I pint of boiling water, to which is added a pinch of salt. The flour should be stirred up with a little cold water before adding the boiling water; let it boil for an hour, strain through a fine strainer, and add enough boiling water to bring the quantity up to one pint. It is better to have the barley water made fresh every morning and evening.

The cream which contains only 15% fat, used in the above formula, is obtained by setting aside a good quality of cow's milk for six hours, and skim off the cream, or it can be taken from the bottle of milk with a Chapin dipper. As a rule the cream from a dairy should not be used, as it contains too much fat.

#### Paragraph 375

When it is necessary to feed an infant from birth (who has had no breast feeding), we recommend the above formula for the first month. After that, begin with Formula No. 2 of other mixtures modifying cow's milk.

Now to give this mixture the first twentyfour hours, dilute it, using three parts of sterile water and one part of the mixture, and give four feedings six hours apart, using 1½ ounces for each feeding.

## Paragraph 376

. During the second twenty-four hours of the

baby's life give the same diluted mixture, only give six feedings. Now, this diluted mixture for the first few days is intended to roughly take the place of the colostrum. On the third day, and thereafter, this mixture undiluted is to be given as an exact substitute for breast feeding as regards time and amount.

#### Paragraph 377

Infants up to one month old, as a general rule, will do as well, if not better, on this mixture than on any other method of artificial feeding. This mixture should always be pasteurized before it is used. The quantity required for the first month will be from one and one-half to two and one-half ounces for each feeding.

## Paragraph 378

Therefore, in order that you thoroughly understand the giving of this mixture during the first month, let us repeat what was just said, giving more details. Now, as we said for the average infant, begin the first day with 11/2 ounces properly diluted, and feed the infant every six hours. The second day feet it every four hours, giving the same diluted amount—1½ ounces. On the third day feed it every four hours, giving the same amount-11/2 ounces—as the first and second days, only on the third day the mixture is not diluted. After the third day, feed the infant every three hours (at 6, 9, 12 and 3), and every third day increase the amount of food, to be given in the 24 hours, 1 drachm (which equals 1 teaspoonful). That is, on the third day the infant is getting 9 ounces of the mixture in 24 hours, or six feedings of 1½ ounces each. On the sixth day you would add I drachm to the 9 ounces, so it would be getting 9 ounces and 1 drachm in the 24 hours for three days, on the ninth day add another drachm, making 9 ounces and 2 drachms, and so on. With this increase of 1 drachm every third day, by the end of the first month the infant will be taking  $2\frac{1}{2}$  ounces at each feeding.

Now we have taken the baby through the first month of its feeding and this is the critical time. If we can only have a baby nurse the first month, so much the better.

# Paragraph 379

The artificial feeding of infants from now on is not so difficult providing the baby has got a good start and making the necessary gain, because after the first month, the digestion of the infant is not so delicate as it is commonly supposed to be. Some authorities give whole milk without any dilution, but you must give the baby plenty of water between feedings. It is this line of feeding with whole milk that is used in the Rotunda Hospital.

## Paragraph 380

After the infant is 2 or 3 months old, we can easily estimate quite accurately the amount of nourishment and milk required to obtain the desired results. There are heat units in all foods known as calories.

## Paragraph 381

An infant requires from 40 to 45 calories per pound weight. Thus, if a baby weighs 12 pounds, it would require 480 calories or heat units every 24 hours. In one ounce of milk there are 21 calories, and to give the infant the necessary food requires an ounce and one-half of milk per pound. The child who weighs twelve pounds would require 18 ounces of milk. We are going to give 6 feedings of 5 ounces each, which would be 30 ounces required in the 24 hours. We are going to use 18 ounces of milk; therefore, we have 12 ounces of water. We can use barley-water, oatmeal water, rice water, romanmeal water, or use plain sterile water, as the case may require, to dilute the milk. As we are using 18 ounces of milk we must multiply 18 by 21, which will equal 378 calories or heat units, but we must supply the difference to make up the 480 calories, the amount required for an infant that weighs 12 pounds. This we do by adding sugar of milk, cane sugar, malt sugar, or some of the malt foods. The sugar of milk is possibly used as much as any of the others and it contains 110 calories to the ounce. Therefore, in a 30 ounce mixture we are going to add one ounce of milk sugar.

If we use barley water, or any of the other waters mentioned in place of plain water, for every ounce of barley, oatmeal, rice or romanmeal, we would get in the neighborhood of 100 calories for every ounce of food stuff so used. Therefore, we would not require so much sugar of milk, cane sugar, or malt sugar, whichever one is used.

# Paragraph 382

How many understand this method of estimating the amount of food required every 24 hours for an infant? Not one of you. Well, to make it clear, you must know these four facts, or rules.

First—Calories are heat units.

Second—Each ounce of milk contains 21 calories.

Third—The average infant requires 40 calories every 24 hours for each pound it weighs.

Fourth—An infant should have 1½ ounces of milk every 24 hours for each pound it weighs.

#### Paragraph 383

Let us illustrate it in figures this way: Now suppose the infant is four to six months old and weighs 12 pounds—12 pounds times 40 calories equals 480 calories, or the number of heat units an infant requires every 24 hours. We multiply 12 by 40 because the average infant must have 40 calories for each pound it weighs.

# Paragraph 384

Now to find the amount of milk to be given in 24 hours to an infant weighing 12 pounds, we multiply 12 by 1½ ounces, which equals 18, giving us the number of ounces of milk required for an infant weighing 12 pounds, which is 18 ounces.

Now we say each ounce of milk contains 21 calories, so if we multiply 18 by 21 it will give us the number of calories, or heat units, that is contained in 18 ounces of milk, which equals 378 calories, or heat units. We lack the difference between 378 and 480—that is, we subtract 378 from 480, which equals 102. So we must, in some way, make up the 102 calories.

Now we must feed the infant six times, and we are going to use 5 ounces at each feeding, so five times 6 equals 30, or the number of ounces of fluid the infant will take in 24 hours. We are going to use 18 ounces of milk, and 18 from 30 equals 12, the number of ounces to be supplied.

The 12 ounces of fluid to be added to the 18 ounces of milk may consist of any one of the cereal foods like barley water, rice water, or oatmeal water. Any of these cereals equal about 100 to 110 calories per ounce. Therefore, an ounce of any one of them added to the 18 ounces of cow's milk will make up the required amount of calories. Plain sterile water, with the addition of sugar of milk may be used, because one ounce of the sugar of milk equals about 110 calories. Malt foods may also be used, and they give about the same number of calories per ounce. Therefore, you see we can use an ounce of any of the above foods, and when added to the milk will give us 110 calories to be added to the 378 calories, which will equal 488, the number of heat units required to nourish a child from 4 to 6 months old, weighing 12 pounds. It is not necessary that the amount of calories be just the exact number, a few more or less would not make any material difference, and it must be remembered that this estimate is the average, because a delicate child would not require the same amount of heat units that a robust child would. Every infant to be fed is a law unto itself, and we must be governed accordingly. you have any difficulty in arranging the right formula, your physician will assist you.

The rule that we have just given you, to estimate the amount of food required for a child who weighs 12 pounds, can be applied to any infant according to its weight.

#### Paragraph 385

There is a preparation made by Mead and Johnson known as Dextrimaltose, which is very efficient and contains about 120 calories per ounce, and can be used to supply the sugar to a great advantage in place of the sugar of milk. Dextrimaltose takes the place of lime water or citrate of soda to break up the curds in cows milk.

## Paragraph 386

Dr. Fischer gives, in his recent work, a chapter devoted to the feeding of children, and gives a very complete set of formulas to be used from birth to 12 months, using Dextrimaltose in combination with whole milk and plain sterile water, and we will give them to you as contained in his book, as they are probably the most simple to prepare, and make an excellent formula. In some cases it may be necessary, and the physician may order lime water to be added in combination with the Dextrimaltose mixture. We recommend these formulas, and advise that you use them at the beginning of any case where you wish to give artificial food after the first month. During the first month, as suggested, use the formula especially prepared for the first month, which we have already given you. The formulas are as follows:

## Paragraph 387

FORMULA NO. 1—(For an infant from birth to three weeks old, weighing about 7 pounds, requirement 318 calories):

Another way to pasteurize the modified milk is—after making up the entire mixture, set it away in a pitcher in the refrigerator, the same as mentioned above for the individual bottles, and then when it is time to feed the infant stir up the mixture thoroughly, and pour the required amount in a nursing bottle and place it in a vessel of cold

water, and have the water deep enough in the vessel so that the bottle is two-thirds covered when set in it. Bring the water to a good boil, then take the vessel off the fire and let the bottle remain in the hot water for 20 minutes, after which time it will be about the right temperature to feed the baby. If necessary, cool it by letting cold water run on the bottle until it is the required temperature.

## Paragraph 388

- FORMULA NO. 2 (For an infant from three weeks to six weeks old, weighing about 8 pounds, requirement 364 calories):
- FORMULA NO. 3 (For an infant from six weeks to two months old, weighing about 10 pounds, requirement 455 calories):
  - R/ Whole milk \_\_\_\_\_\_\_\_\_17 ounces
    Hot water\_\_\_\_\_\_\_\_15 ounces
    Dextrimaltose \_\_\_\_\_\_\_\_1 ounce
    Divide in eight feedings of 4 ounces each.

Feed every three hours.

- FORMULA NO. 4 (For an infant from two to four months old, weighing about 11 pounds, requirement 500 calories):
- FORMULA NO. 5 (For an infant from four to six months old, weighing about 12 pounds, requirement 546 calories):
  - R/ Whole milk \_\_\_\_\_\_22 ounces
    Hot water \_\_\_\_\_14 ounces
    Dextrimaltose \_\_\_\_\_1 ounce

Divide into six feedings of 6 ounces each. Feed every three and one-half hours.

- FORMULA NO. 6 (For an infant from six to nine months old, weighing about 14 pounds, requirement 637 calories):
  - R/ Whole milk \_\_\_\_\_26 ounces

#### LECTURES OF INTEREST TO WOMEN

Hot water14	ounces
Dextrimaltose 1	ounce
Divide into five feedings of 8 our	nces each.
Feed every four hours.	

FORMULA NO. 7 (For infants from nine to twelve months old, weighing about 17 pounds, requirements 773 calories):

Feed every four hours.

## Paragraph 389

Dr. Holt, of New York, gives a very complete and comprehensive formula modifying cow's milk using milk, cream, limewater, water and milk-sugar.

The milk should be whole milk, and the cream skimmed off the top of the whole milk. Do not skim the cream off and then consider that you are using whole milk. Whole milk must contain all the cream and milk.

We will give you these formulas, so if they should be prescribed by the physician or you wish to use them for any special reason you will have them.

#### Paragraph 390

1 and 8 april 020				
FORMULA NO. 1 (Third to Fourteenth Day):				
Milk 1 to 2 ounces				
Cream 1 to 2 ounces				
Limewater34 to 1½ ounces				
Water 9½ to 18½ ounces				
Milk-sugar (even table-				
spoonfuls) 1½ to 3 ounces				
Ten feedings. Feed every two hours from 6				
a.m. to 10 p.m. Feed also at 2 a.m. Quantity, 1 to				
$2\frac{1}{2}$ ounces.				
FORMULA NO. 2 (Second to Sixth Week):				

Milk 2 to 3¼ ounces Cream 2 to 3¼ ounces Limewater 1½ to 2 ounces Water 14½ to 23½ ounces Milk-sugar (even table-	na no. z (becona to bixth week):
Limewater 1½ to 2 ounces Water 14½ to 23½ ounces Milk-sugar (even table-	Milk 2 to 3¼ ounces
Water	Cream 2 to 3½ ounces
Milk-sugar (even table-	Limewater 1½ to 2 ounces
<u> </u>	Water14½ to 23½ ounces
0.7.	Milk-sugar (even table-
spoonfuls) 2½ to 4 ounces	spoonfuls) 2½ to 4 ounces

Ten feedings. Feed every two hours from 6 a.m. to 10 p.m. Feed also at 2 a.m. Quantity, 2 to  $3\frac{1}{4}$  ounces. FORMULA NO. 3 (Sixth to Eleventh Week): Cream 3 to 4½ ounces Water \_\_\_\_\_16½ to 25½ ounces Milk-sugar (even table-Eight feedings. Feed every two and a half hours from 6 a.m. to 10 p.m. Feed also at 2 a.m. Quantity 3 to  $4\frac{1}{2}$  ounces. FORMULA NO. 4 (Tenth Week to Fifth Month): Milk 8 to 12 ounces Limewater 1½ to 2 ounces Water \_\_\_\_\_15 to 23 ounces Milk-sugar (even table-Seven feedings. Feed every three hours from 6 a.m. to 10 p.m. Feed also at 2 a.m. Quantity 4 to 6 ounces. FORMULA NO. 5 (Fifth to Tenth Month): Milk 11½ to 18 ounces Cream 3% to 6 ounces Limewater \_\_\_\_\_\_l½ to 2 ounces Water \_\_\_\_\_13½ to 22 ounces Milk-sugar (even tablespoonfuls)..... 4 to 6½ ounces Six feedings. Feed every three hours from 6 a.m. to 10 p.m. No feeding between 10 p.m. and 6 a.m. Quantity, 5 to 8 ounces. FORMULA NO. 6 (Tenth to Twelfth Month): Milk \_\_\_\_\_\_\_19½ to 21½ ounces Gream 5\% to 6\% ounces Limewater 2 to 2 ounces Water \_\_\_\_\_15 to 18 ounces Milk-sugar (even tablespoonfuls)..... 4 to 5 ounces Five feedings. Feed every three and a half

hours from 6 a.m. to 10 p.m. Quantity, 2 to 9 ounces.

## Paragraph 391

In this connection we might state that there are other combinations than the ones just given, but these are in general use by physicians, and to give you too many formulas would be confusing. Some physicians prescribe what is known as "Top-Milk Mixtures'', and what we mean by ''Top-Milk Mixtures' is the upper portion of a quart of milk set aside until the cream layer separates. The percentage of fat in the top-milk is estimated from 4 ounces to 24 ounces, and contains from 5 to 20% of fat respectively. Some physicians use various amounts of this top-milk in combination with the bottom-milk, adding lime water, sugar milk and plain water in required proportions. The top-milk is always dipped off with the Chapin dipper. The physicians who use these formulas will give you special instructions in regard to the manner and amount with which the food is prepared.

## Paragraph 392

Make an increase in the formulas every seven or eight days until the full amount of each ingredient is reached at the end of the given time. If you are using Formula No. 3 of Holt's, at the beginning of the sixth week you would use 3 ounces of milk, and each week you will increase it until the eleventh week you would be giving 4½ ounces, and all other ingredients would be increased in like proportion. For the water in any of the Holt formulas, you can use barley water, rice water, as is indicated in any given case. This increase in the amount of food applies to any formula you may be using.

#### Paragraph 393

Now in the artificial feeding of infants, every case is a law unto itself. No fixed rules can be laid down that can be used indiscriminately and applied to any case. We must take into consideration the health of the child, its physical condition, the time that we start the artificial feeding, and condition of the bowels and the facilities that are at hand to carry out the necessary success of the artificial feeding. However, we must recognize the

needs and the kind of feeding required in each case. Suppose the child has been taking Eagle Brand for two or three months, and we find a baby that is fat, white and puffy, we know that the diet must be changed, so we will place the baby on a modified milk formula according to its age and condition.

## Paragraph 394

If we find a child suffering with constipation, you will add Phillips' Milk of Magnesia, one-half to one ounce, to the whole mixture, so as to get a small amount in each feeding. If you are called upon to care for a baby that is nursing, losing weight all the time, sucks its fingers, cries after nursing, is fretful, you know the child is not getting enough food, and we must add a modified milk to its diet, and if the mother can continue to nurse the baby two or three times a day, we give what is known as mixed feeding.

Now with these suggestions, you will understand what we mean when we say that no fixed formula can be written that will apply to every case. With a little study on your part, noting the action of the different foods and different combinations and the results obtained in each, as you will learn in your practice, you will soon become very efficient in selecting and preparing the food that will meet the requirements in any given case that you may have under your care.

#### Paragraph 395

You will find that some children will do well on one combination, and it will not agree with another. You must learn from experience to select and prepare the right combinations to meet the requirements. Before we pass to the preparation of the formulas just given, using modified cow's milk, let us mention the patent infant foods on the market.

#### Paragraph 396

There are a great many in number, but none of them are as good as modified cow's milk for continued use. They all have their advantages and disadvantages and we cannot recommend their exclusive use. Occasionally we may find a case where modi-

fied cow's milk does not seem to agree with the child. Such prepared foods will give temporary relief, but must not be given for any length of time. Suppose, for example, we have used a food that seemingly makes good fat, and baby increases in weight rapidly, and you think you are having good success. The child develops to the point where it begins to walk, and all of a sudden it starts to lose weight, and takes on a white, waxy color. It cannot stand on its feet, and we have a case of rickets to contend with. Any physician who has practiced medicine will tell you that they often come in contact with such cases, caused by an exclusive diet of some of the patent foods. Therefore, many a case of rickets, or scurvy, can be traced to the giving of such foods. Yet we know that there are some virtues in these patent foods, and to attribute all cases of rickets and scurvy to this one cause is wrong, because children who are fed on sterilized milk will have scurvy, and a great many facts must be considered before condemning or praising one or all of the many patent foods. Anyone can understand that there are a large amount of these foods sold, and there are many good reasons why this is true.

FIRST: Because the laity are educated to use them when breast-feeding or cow's milk does not agree with the child;

SECOND: Some physicians advocate the use of a great many patent foods, because they are prescribed with less effort on their part;

THIRD: As a rule they are much easier to prepare and less trouble than the modified cow's milk. This appeals to the mother;

FOURTH: Because the cow's milk modified by the addition of the foods, in many cases, yields good results.

# Paragraph 397

There are two kinds of infant foods on the market. The ones that are combined with cow's milk and those that are not. As fresh cow's milk is without doubt the best food for infants ,we recognize the fact that the artificial feeding of infants with these patent foods should be used in connec-

tion with, and modified by fresh cow's milk. When you use any of these foods, as may be prescribed by the attending physician, you will follow his directions or the one you find on the wrapper which accompanies the package. Some of them require that the cow's milk should be boiled.

## Paragraph 398

Let us impress upon your mind one thing: that is, that boiling cow's milk kills its nutritive qualities and makes it unfit for infant feeding, and when boiled milk is given to an infant for any length of time it will invariably produce rickets, scurvy and constipation. You remember this—never give an infant boiled milk unless ordered to do so by the attending physician.

## Paragraph 399

Let us direct our attention this morning to the selection and modification of cow's milk for infant feeding, at the same time rendering it as pure as possible. This brings us to a very important point, and that is, destroying the bacteria in milk by the process of pasteurization and sterilization.

#### Paragraph 400

By the terms 'pasteurization' and 'sterilization' we mean the heating of milk at a given temperature for a given length of time. Pasteurization is done by heating the milk for about twenty minutes to 140 degrees F. Sterilization is done by heating milk to the boiling point (212 degrees F) and keeping it boiling for twenty minutes.

This must be thoroughly understood in order that we may be able to give the infant milk that is as free from bacteria as is possible to be obtained. All cow's milk contains bacteria, and the longer the period from the time of milking until it is prepared for the infant, the more bacteria we will have to contend with. Therefore, the most important point is to have the milking done under the best sanitary conditions and have it immediately delivered to the consumer. This gives us as pure milk as can be obtained. Some people have the idea that it does not matter how filthy the cow's milk is, or how

long it is standing (just so it is sweet), or how many germs it may contain, if it be pasteu ized or sterilized it will become free from germs and it will be suitable food for infants. This is not true, because pasteurization and sterilization does not kill the spores of all bacteria.

## Paragraph 401

THE PASTEURIZATION OF MILK: To pasteurize milk it must be heated to a temperature from 140 to 160 deg. F. for 20 minutes, which answers all practical purposes, and causes very little, if any, change in the chemical character of the milk, and nothing whatever as to taste.

The pasteurization of milk is more desirable than sterilization, and we have very good authority that if we take pure milk and heat it to the point of pasteurization, it will destroy tubercle bacilli, typhoid and cholera bacillus, as well as pneumococcus, and also most of the ordinary milk germs. Let it be remembered that constipation, scurvy and rickets are recognized and associated factors when overpasteurized milk is fed to infants. The profession are rapidly departing from what they claim to be improper and dangerous methods of treating raw milk on account of such conditions developing, which allow children to enter into womanhood and manhood in a marked devitalized condition. The day may be close at hand when pasteurized milk will be considered the same as sterilized milk, and the use of both pasteurized and sterilized milk will be discontinued. Yet today Fischer says you should pasteurize cow's milk if you do not know the source of your milk supply.

#### Paragraph 402

THE STERILIZATION OF MILK: To sterilize milk in order to destroy pathogenic bacteria, according to Soxhlet, we must heat milk to temperature of 210 deg. F. and continue it at this temperature for 20 minutes. This intense heating causes marked changes to take place in the milk; some we understand and others we do not, but we do know that it makes the milk more difficult to digest, that it is not acted upon the same by the gastric juices, and the

free fat present in sterilized milk is not properly assimilated by the infant. Then we know that sterilized milk was introduced to the profession by Soxhlet. It had many advocates and thousands of babies have been brought up on steriliezd milk, but today the sentiment has changed. We admit that sterilized milk destroys bacteria, it also destroys the quality of the milk at the same time. We also know that sterilizing milk does not kill all the spores of pathogenic bacteria, and infants fed on sterilized and boiled milk develop scurvy, rickets and constipation. On account of such conditions developing after the prolonged feeding of sterilized milk and boiled milk, and knowing the immediate improvements that follow when the diet is changed to raw milk, beef juice, raw white of egg, fresh fruit juices, Fischer says in his latest book: "In my opinion I have so frequently been disappointed in the use of sterilized milk that within the last few years I have entirely discarded its use."

# Paragraph 403

It will be well to remember that infants fed either on pasteurized or sterilized milk have a tendency to constipation, scurvy and rickets. The symptoms will not be so marked in cases of infants fed on pasteurized milk, as those on sterilized milk. In other words, pasteurization and sterilization of milk has its disadvantages as well as its advantages. We must pasteurize milk when we do not know the source of our milk supply and during the hot summer months.

There are a great many apparatuses for the pasteurization of milk. If you so desire, you can have your patients purchase one of the outfits, and follow the directions which accompany them, but for all practical purposes, if you will take the milk and heat it for twenty minutes to the steaming point (not boil it), you will pasteurize the milk, which will answer all practical purposes in artificial infant feeding.

#### Paragraph 404

We have also given you a way to pasteurize milk by placing the bottle containing the milk in a

deep vessel, and bringing the water to the boiling point. If you will prepare your milk in this way, you will heat it to a sufficient temperature to pasteurize it, and at the same time you will not cause any changes to take place in the milk. Personally we recommend that you use this method for pasteurization of modified cow's milk.

## Paragraph 405

Fischer says: Let it be distinctly understood that certain chemical changes are brought about in milk when it is steamed, be it in the process of sterilization or pasteurization. Neither sterilization or pasteurization adds to the digestibility of milk.

#### Paragraph 406

In selecting cow's milk for feeding infants we must obtain fresh milk and herd milk, that is, milk from several cows. If the milking is done, as directed, and in a short time the milk is placed on ice, in a refrigerator, or a cool place and kept at a low temperature until it is thoroughly cooled and the cream is formed and then immediately modified for the infant's food, as desired, it will not require any pasteurization and sterilization. When we obtain such certified milk all that is necessary is to use sterile utensils and heat the milk to a little higher temperature than is required for infant feeding, as we have just personally instructed you to do.

## Paragraph 407

CARE AND SELECTION OF NIPPLES AND BOTTLES.

A rubber nipple which approaches the human breast-nipple in shape and action is the best one, and for this the 'Hygeia', either the old or the improved anti-colic style, is the best. Also the 'Hygeia' bottle is recommended. There should be several of each on hand, both bottles and nipples, so as to allow for perfect sterilization between feedings.

#### Paragraph 408

Immediately after the child has nursed, the bottle and nipple should be carefully washed, first in cold water and then hot water. It is well to

allow the bottles to stand with water in them, or you can place them in the solution with the nipple. The nipples, after being washed and sterilized. should be placed in a covered glass or jar kept for that purpose containing bicarbonate of soda solution.

# Paragraph 409

This solution is made by using one tablespoonful of bicarbonate of soda to the quart of boiling water. The solution should be made fresh every day. You will need only one or two nipples ready to use at a time. Those made of black rubber are the best. We cannot say how long the average rubber nipple will wear, as boiling softens them. You must be careful to see that the opening in the nipple is the correct size so that the milk does not flow too slowly or too quickly. Some have a very small opening, which can be enlarged with a large needle. When the opening allows the milk to flow too freely and the nipple becomes too soft it should be discarded.

## Paragraph 410

It is a great convenience to have enough bottles for the 24-hour feeding and fill them all at once. After each bottle is filled with the required amount of milk for a feeding, they are properly covered and placed in the refrigerator. At each feeding all that is necessary is to set the bottle in a pan of cold water and warm it to the required temperature. At the same time boil the nipple in a separate basin. After the nipple is placed on the bottle the milk should be thoroughly mixed before given to the infant. Each morning before the bottles are filled with the milk they should be thoroughly sterilized, and this is usually done by filling the bottles with cold water, placing them in a kettle of cold water and allowing them to boil for twenty minutes. Put the nipples to boil in the same water. The bottles and nipples should be allowed to cool before removing from the kettle.

#### Paragraph 411

THE INTESTINAL TRACT (THE BOWELS): If we are to keep the baby well and its general health in good condition, we must see that the bowels move regular-

ly. They should, if possible, move twice a day, night and morning, until the child is two years old. You should train the baby to have a regular hour in the morning and a regular hour in the evening from birth. Some mothers will not take the trouble to do this, but it is of great importance to the child's health, and this should be done, and you must convince the mother of the necessity of forming regular habits in the infant.

## Paragraph 412

Make the baby's bowels move. We are all creatures of habit, and if a regular time is established twice a day from the day of birth, it will soon fall into the habit. The best time for the morning movement is just before its bath. Infants' bowels should not move immediately after feeding, because it has a tendency to regurgitate the feeding. After the baby is one year old, this is not so important. The best time for the evening movement is just before the baby goes to bed, immediately preceding his evening feeding. To cause the bowels to move, place the baby on its back on your lap, with its feet elevated. You do this by holding the feet and legs up with one hand and leaving one hand free. Place a rubber sheet over your lap and a napkin under the baby's buttocks. If it does not move its bowels in a minute or so, place a little vaseline on the tip of a clean finger and slightly irritate the baby's rectum. Keep the finger there a few minutes, but be careful the fingernail does not injure the parts. This will often cause a movement. Let the baby know it is there to move its bowels. If this method does not produce the desired effect, it will be necessary to resort to the use of a soap stick or a glycerine suppository for infants. The soap stick can be made from Castile soap and should be the same shape, only about twice the size in diameter and half as long, as the glycerine suppository for infants you obtain from the druggist. Take one of the soap sticks and smear it with vaseline upon the small end and introduce it into the baby's rectum. Keep it there until the contents of the bowels come away and push it out. You may use either the soap stick or glycerine suppositories. In using the

glycerine suppositories, they are held in the rectum until the bowels move. It may be necessary to use one or the other several times before the baby will know what is expected. In some cases, they require the soap stick for a long time. There is no harm that can result from its continued use. The soap sticks can be used several times. They may be washed and when they become too small they can be discarded and a new one used.

## Paragraph 412

After a baby is six months old it should be taught to use the vessel and sit on its nursery chair. Here you will be required to use the same methods of persuasion as practiced with the vaselined finger and soap stick, and it will accomplish the same results. Have the nursery chair so arranged with an opening to put the hand under the seat, so when baby is sitting upon the chair, the soap stick may be inserted into the rectum and held in position. Often using the finger, as mentioned above, will be effective.

#### Paragraph 413

INFANT STOOLS: You should be familiar with the appearance of a healthy stool, then you as a nurse can tell the normal from the abnormal. For a few days after birth, the stool is a dark color in all healthy babies. It will be necessary for you to change its napkin several times a day for a few days until this has entirely disappeared. After this the stools of an infant nursing the breast should have the appearance of yellow mustard. It should be free from all curds or lumps, smeary or pasty-like in consistency and have an acid reaction.

#### Paragraph 414

Now let us consider in a general way the abnormal condition of the stool. We often have cases where green stools occur and is also often mixed with white or yellow curds caused by the casein or fat that is contained in the food. We can tell whether it is a casein curd or a fat curd by placing it in a 10% formalin solution and allowing it to stand from six to eight hours. If the curd is due to

casein it will harden, if it due to fat, it will become soft.

In chronic indigestion we generally have a stool that is quite pasty and clay-like with a foul odor. Green stools occur quite often in new-born infants and are generally caused by chemical reaction of the bile-pigment.

## Paragraph 415

Drugs like bicarbonate of soda given for a few days will cause green stools; also small doses of calomel and an excess amount of bile will often cause very green stools.

#### Paragraph 416

It must be remembered that there are cases, and you will see them frequently, in infants under three months old, fed exclusively on breast milk, in which the stools contain mucus, curds, and are green and lumpy, yet such infants thrive, sleep well and are apparently healthy. Just why we have such a condition not affecting the infant, is difficult to determine. When stools are brown or muddy in color, it is frequently caused by diet of animal food, that is, when children are fed a great deal of broth. Drugs may also cause a dark brown stool. Mucus is present more or less in all healthy stools. If there is a sufficient amount that can be plainly detected with the naked eye, we consider it abnormal. All intestinal diseases cause more or less mucus. When white or light-gray stools occur , there is lack of bile present and such stools are usually very offensive and consist principally of fat.

## Paragraph 417

When any of the above abnormal conditions of the stool exist that affects the baby, the bowels should be thoroughly cleaned out by giving milk of magnesia or castor oil, irrigating the bowels out good once or twice a day with normal salt solution and allow no food except a little barley water or plain sterile water for twenty-four hours. When this does not correct the case, call the attending physician, as medical attention at this time will be of great value in preventing stomach or bowel trouble.

# Paragraph 418

TREATMENT OF CONSTIPATION: Some babies have constipation to a very marked degree, and this will be found more frequently in bottle-fed infants than in those fed from the breast. This is generally caused in bottle-fed infants by the milk being too rich in proteids—that is the large amount of curd in cow's milk. Not having a regular time to move the bowels will cause constipation. Remember this and note the importance of establishing a regular time for the infant's bowels to move. Do this, and they will carry it with them through life. Another predisposing cause is, when the child does not have enough exercise. In breast-fed babies, constipation is often due to the mother's diet being faulty.

## Paragraph 419

The ideal way to regulate the bowels and cure constipation is by giving correct diet. If in a young infant, we dilute the feeding one-fifth with water and add a little more cream and use a weaker feeding formula for a short time, it will often be an advantage. For the bottle-fed babies, when possible, use distilled water instead of plain boiled water in making up the food. Let us repeat again, 'Have a regular time for moving the bowels.' Try the vaselined finger or soap stick that has already been mentioned. The temporary use of the glycerine suppositories night and morning, or an injection of one or two ounces of warm soapy water may often suffice to remove the accumulation.

#### Paragraph 420

If the stools are large and hard, as often found in bottle-fed babies, introduce an ounce of sweet oil in the rectum by means of a glass funnel and rubber tube, or by any suitable syringe. This is often efficacious in removing the hard secretions which are formed. The glass funnel and tube can be purchased at any drug store. Use a soft rubber catheter in connection with the funnel. Both should be boiled before using. The open end of the catheter should be slipped over the funnel and the other end vaselined and passed into the rectum about three inches. This should be done very gently so as not to cause any irritation. The baby should be lying on

its back, with its legs and feet elevated. The sweet oil should be slightly warmed and slowly poured into the funnel. If the oil refuses to run, move the tube in and out of the rectum gently, and it will soon start. After the oil has run into the rectum, gently withdraw the tube and pinch the buttocks together and hold them for a few minutes so the oil cannot escape. From one-half an hour to three hours after the treatment, the baby will have a soft stool. Sometimes it takes a little longer.

## Paragraph 421

To give an enema or colon irrigation, lay the child in the same position as above mentioned, with its feet elevated. Take an ordinary fountain syringe with a long connection tube and use a number 12a soft rubber catheter. The small catheter is connected to the tube from the fountain syringe with a small piece of glass tubing, or better still, an ordinary eye dropper. Fill the bag with the desired solution, unless instructed differently, use a normal saline solution, and have it good and warm. Vaseline the catheter and insert the tip of it into the baby's rectum. The water is allowed to run from the bag and the catheter is slowly pushed into the rectum three or four inches. The fountain syringe should hang about four feet above the baby's body. Allow any required amount of the solution to run into the baby's bowels. True, the baby's bowels cannot hold this amount of water, nor will it stay. It will immediately run out along the side of the rubber catheter washing out the contents of the bowels. Continue the irrigation until the solution returns clear. In young infants use the saline solution only half strength. In all cases after irrigating the bowels, remove the glass connection, and let all the solution run out of the colon before removing the catheter.

#### Paragraph 422

Massaging the bowels with your warm hands will often assist in relieving constipation. Rub the skin over the bowels with the tips of your fingers, using a gentle pressure.

## Paragraph 423

Many mothers resort to various medications, for the treatment of constipation. The frequent use of castor oil is very bad practice. You may give one dose of oil when the baby is troubled with colic, diarrhoea, and the intestines are filled with undigested material, but it should not be given in chronic constipation, or given as a general routine. The dose of castor oil during the first year is from one-half to one teaspoonful.

## Paragraph 424

Castoria is a great favorite and a very good formula. Phillips' Milk of Magnesia is much better, and has a better effect on the stomach and bowels, so if you are going to use drugs at all, use Phillips' Milk of Magnesia. It can be put into the milk of a bottle-fed baby in any required amount. In constipated babies, use more sugar of milk instead of so much lime water. If a baby three months of age is taking four or five ounces of milk at a feeding, you can add one-half ounce of Phillips' Milk of Magnesia to the 24 hour feeding. Increase or decrease the amount as needed. In this way the baby gets a small amount of milk of magnesia in every feeding. In breast-fed babies ,a few drops of milk of magnesia can be added to the water the baby takes from the nursing bottle.

#### Paragraph 425

COLIC: Infants for the first three months suffer with colic more or less. Especially is this true in bottle-fed babies. Colic is the formation of gas in the stomach and intestines, without any inflammatory condition being present. The reason that a baby has colic is probably from two general causes: First, the lack of proper muscular tone to the intestinal walls; second, errors in diet.

When the colostrum continues for several days, and the milk is not secreted normally, is another cause of colic. Such conditions as women who menstruate or become pregnant during the nursing period will usually cause colic.

## Paragraph 426

When an infant has colic it cries out loudly, and gives sudden shrieks, due to pain in the abdomen caused by distention of gas. Infants asleep will often awaken with a sudden start and cry. They will flex the legs, and move them back and forth. The abdomen is often swollen and hard. Such symptoms will continue, and the infant will cry until the gas is passed by the mouth or from the bowels, when the symptoms suddenly cease.

## Paragraph 427

Attacks of colic in an infant, you will find, are usually associated with constipation; therefore, when an infant is suffering with colic, the first thing to do is to give an enema, and see that the bowels move freely. Occasionally diarrhoea occurs with colic, but it is not the rule. It is well for you to remember that the origin of all colic is certainly the feeding, so the diet must be carefully regulated, and for the bottle-fed infants it will, in some cases, be necessary to change or modify the milk formula.

## Paragraph 428

If the stools are thin and greenish, smell very acid, and cause a redness of the skin on the buttocks, we may say the food contains too much sugar. In that case it would be well to stop using any sugar (if bottle-fed), but sweeten the food with saccharine tablets, using one grain of saccharine for every pint of food. When constipated, add the required amount (start with ½ ounce in the twenty-four hour feeding) of Phillips' milk of magnesia to the food, or calcined magnesia, ½ teaspoonful to each eight ounces of food. Either will relieve the constipation. In these colic cases, if necessary, increase the amount of magnesia to obtain the desired results.

#### Paragraph 429

When a baby has colic, and the stools contain a great deal of white curds, this condition associated with constipation is an indication that there is too much protein in the food. This often occurs where milk is superheated in sterilizing it, or milk

that is strongly acid in reaction. To increase the protein in breast-fed infants, increase the mother's exercise up to the point of fatigue. In artificially fed infants, use a weaker formula or give the infant a half ounce, more or less, according to the infant's age, of water before each feeding.

These food regulations would be prescribed by the attending physician in cases where colic is severe.

#### Paragraph 430

TREATMENT OF COLIC: The treatment and cure of colic is not so difficult when we know the cause. The quickest method to relieve the gas from the bowels is to give a saline enema, weak soap enema, or an enema of warm chamomile tea. To make the chamomile tea, take an ounce of German chamomile flowers, and steep them in a quart of boiling water for fifteen minutes , then strain, and irrigate the rectum and colon with a pint or two of the chamomile tea at a temperature not over 90 to 100 degrees F., which is about the right temperature for all enemas for infants. The infant hot water bag may be applied to the abdomen; massaging the abdomen with warm sweet oil is also good. Let the hand move very gently over the ascending transverse and descending colon. That is, follow the direction of the large intestines, starting at the lower righ-hand side of the abdomen, extending the hand up towards the ribs, then across the abdomen, and down the opposite side.

#### Paragraph 431

The spice plaster applied to the abdomen will often afford much relief from the pain. You will make a spice plaster by taking equal parts of ginger, cloves, cinnamon and allspice, and placing the mixture between a thin flannel cloth, and dampen it with hot whiskey, brandy or 40% alcohol.

#### Paragraph 432

Do not recommend or allow your patients to use any of the so-called 'Colic Cures' that are for sale at the drug stores, because most of them con-

tain more or less opiates, which are harmful to infants. A soda mint tablet dissolved in a table-spoonful of warm water may be given to the infant every half hour for a few doses during the attack, or if preferred, give one teaspoonful every ten minutes.

# Paragraph 433

Remember that during an attack of colic, an infant must never be fed. The warm milk, it is true (either the breast milk or bottle fed), may stop the crying for a few minutes, but it will only increase indigestion, and the gas will accumulate and the pain return as bad, if not worse, than before.

# Paragraph 434

Lifting the child up over the shoulder, and applying friction by rubbing the back, thus changing its position, sometimes causes the gas to escape by the mouth.

# Paragraph 435

There is an infant anodyne granule made by the Abbott Alkaloidal Co. that is worthy of attention. It is made with and without Codine, for young infants; the one without Codine is preferred. You can give the one without Codine every 15 to 30 minutes until relieved. Give the granule by dissolving it in a teaspoonful of warm water.

#### Paragraph 436

In every case of colic, let your first thought be to empty the bowels by giving a colon irrigation, the same as you have been instructed to give in cases of constipation. If the case is so severe, which sometimes occurs, and the baby seems exhausted and cold, especially the hands and feet, as a result of the pain, it should be given three or four drops of brandy in a teaspoonful of hot sweetened water, and placed at once in a hot bath.

# Paragraph 437

In infants suffering constantly with recurring colic, the physician should be summoned, because if you don't relieve or prevent it by means just described, it will be beyond your ability as a nurse, or the mother's, to treat the case without

assistance, as it will need special medical attention.

# Paragraph 438

DIARRHOEA: Some babies have more or less diarrhoea, and when it occurs we know it is caused generally by the food being contaminated, or something is wrong with the food or water that the baby is taking. Impure milk, too much fat, too much sugar, imperfect action of the bile and pancreatic juices are all causes of diarrhoea. In the breastfed baby it is often caused by the mother having received bad news or a nervous shock of any kind. So when the baby has diarrhoea, and it continues, it is a safe procedure to notify the physician and not rely wholly upon your own judgment because a little judicious treatment at the commencement of any form of diarrhoea may often avoid a severe illness. It is often the beginning of some acute infectious disease. Diarrhoea occurs more frequently in hot climates. The summer diarrhoea, which all mothers dread so much, is usually caused by the improper care regarding baby's feeding. Bottle-fed babies are much more liable to attacks of diarrhoea than breast fed babies. If a baby under your care is suddenly taken with diarrhoea, has fever and seems greatly depressed, you do this: stop all food; give a dose of castor oil. 20 to 30 drops or more to a young infant, one teaspoonful or more to a child six months old. Give barley water at regular three-hour schedule. Baby may have an ounce or so of plain sterile water several times a day. Have the physician see the case as soon as possible. When you start feeding use about one-half the regular amount, and increase a little every feeding until the baby is on full diet again. Remember that the mildest cases of diarrhoea may prove rapidly fatal in the infant. That is why we recommend that you use great care not to take too much responsibility upon your own shoulders in regard to such cases, so let the physician help you.

# Paragraph 439

WEANING: Weaning the baby is one of the important subjects with which you must be familiar, because while you may not have charge of the case at

# LECTURES OF INTEREST TO WOMEN

this time, you had the mother during her confinement and undoubtedly you will be asked a great many questions concerning the care of the child, and you cannot know too much about the care and feeding of infants.

When we speak of weaning a nursing infant we mean the gradual giving of modified cow's milk, or one of the foods in place of mother's milk, on which it has lived since birth. When we speak of weaning a bottle-fed baby we mean that it is to be given other foods in addition to modified cow's milk, such as meat broths, vegetable soup, toast, gruels, etc.

# Paragraph 440

In countries where the summers are hot, it is always best to wean babies during spring or fall. We cannot give any special time when the baby should be weaned, whether it be at this age or that age. There are many conditions that might occur in connection with the individual infant that would necessitate weaning it at an earlier or later date.

## Paragraph 441

Mother's milk, after nine months, under normal conditions, rapidly begins to lose its food value, so this is the selected time to begin weaning the infant. Under no consideration should the child be nursed longer than one year.

#### Paragraph 442

Weaning is more gradual in some cases than in others. Excellent results are obtained in a few days by the absolute cessation of breast feeding.

#### Paragraph 443

If a nursing mother becomes pregnant, then we must wean the baby without question.

# Paragraph 444

Weaning becomes imperative when a nursing infant does not gain in weight, cries a great deal, (especially after nursing) has thin, watery stools and does not sleep well.

## PREPARATION OF THE PATIENT

## Paragraph 445

An infant must be weaned if the mother becomes ill with any of the infectious diseases, accompanied with fever.

Weaning an infant from the breast is frequently a very difficult task, and you must have the cooperation of the mother in every sense of the word. In young infants, two or three months old, you can usually substitute a bottle of modified cow's milk for a breast feeding and gradually increase the number of bottles of feeding until the child is completely weaned, but with infants over six months of age, to attempt such a procedure is usually without effect. In older infants the best and most successful way is the sudden removal from the breast and feeding entirely with artificial food. greatest difficulty is to overcome the stubbornness with which some children will hold out, but there is no grave danger and the attendants must be masters of the situation. To make weaning less difficult it is always well to accustom the child to the bottle early in life when giving it water.

## Paragraph 446

If for any reason it becomes necessary, by order of the physician or otherwise, to wean a nursing infant between 6 and 9 months of age, take it from the breast and start in with a formula onehalf the regular strength. Thus if an infant is 8 months old, start with a formula for a 4 months-old infant; if 6 months old, start with a 3 months' formula, and so on. Then gradually increase the food every two or three days until the correct formula is obtained. If under six months old give mixed feeding, using the same rule as mentioned above, only wean the infant gradually, that is, you would start with one feeding a day of modified cow's milk and give this for two or three days. Then give two artificial feedings in like manner, and very soon the infant would only be nursing once during the 24 hours, and that would be the last nursing at night. Gradually increase the strength of the food until you are giving the formula to correspond with the child's age-keeping the gradual increase until the

ninth month—then begin to add other foods to the diet just the same as you would do when you wean the infant from the breast at nine months, only you do not altogether stop the modified cow's milk like you do in breast feeding.

## Paragraph 447

When you wean a nursing infant between the age of 9 and 12 months, which is the regular and normal time, take it from the breast and give it at first a modified formula for a six months-old infant or Formula No. 5. If this does not cause any stomach or bowel trouble, gradually increase the food each day until the Formula No. 6 or 7 is reached, according to its weight. After the infant is doing well for one or two months on Formula No. 7, you can begin to give it part of a soft boiled egg once a day, toast or Zwieback, also Graham crackers soaked in sweetened water, prune, orange and vegetable juices. Water from cooked vegetables, especially spinach, carrots, beans and peas. When giving other foods in addition to the modified cow's milk, you would give less of the milk, or better still, miss a regular milk feeding and give other foods. You will note the weight of the child and the number of calories required and let this be your key as to the amount of food given.

#### CARE OF PREMATURE INFANTS.

#### Paragraph 448

Now let us consider the special care required for premature infants. Quite often children are born before their time and require special care.

Great nursing skill, great sacrifice and devotion on the part of the mother and nurse is required in order to be successful in such cases, but with the proper care, children who are able to nurse, breathe and digest food can generally be saved, and when grown up, they become strong robust children.

There is a popular idea among the laity that a seven months baby has a better chance for life

than an eight months. This is not true, because the longer an infant remains in the uterus the stronger it becomes. Yet it is well to remember that if pregnancy goes too far over time the child may die.

# Paragraph 449

All children are premature who are born three weeks before the normal end of pregnancy. Such premature infants are very small, weighing 2 to 5 pounds. The blood vessels show through the skin, which makes the skin very red. The body is covered more or less with a fuzzy growth of very fine hair. The ears are very soft and pliable, and the infant has a very old looking appearance after the loss of weight has occurred, and the little body is shriveled.

# Paragraph 450

The cry of a premature infant is very weak and whining. It generally lies in a peculiar stupor; the temperature subnormal and very irregular; bowels sluggish; urine scanty; and generally the infant becomes jaundice. The loss of weight is greater in proportion than that of children born at term, and it requires a great deal more time for the premature infant to regain its normal weight, requiring some 20 to 30 days. Such infants must be forcibly fed, and the collapsed condition of the lungs properly relieved, if we expect to be successful in our treatment.

#### Paragraph 451

Three important conditions are necessary to insure success in saving the premature infant. First, it must have mother's milk; second, it must have good nursing; and third, it must be placed in an incubator. Heat is absolutely necessary for a premature infant and this is obtained by the modern incubator. It not only furnishes the proper heat, but also insures the infant inadequate fresh air supply. Institutions, such as maternity hospitals and general hospitals taking obstetrical cases, should be equipped with incubators of the modern type. Premature infants can be brought from a great distance to these institutions where they can receive the proper care.

## Paragraph 452

In cases where it is impossible to obtain the services of such an institution equipped with an incubator, you can make a warm nest for the premature infant by means of a large clothes basket, well lined with blankets, and apply the heat with hot water bottles. The hot water bottles are placed around in the folds of the blanket and changed frequently, in order to keep an even temperature. A soft pillow can be placed in the bottom of the basket. With such a makeshift for an incubator, and with the proper constant attention, good work can be accomplished.

#### Paragraph 453

If the child is very premature, and if its temperature remains low, the temperature of the water in the hot water bottles must be higher than when the child's temperature is more favorable. The basket should be placed in a well ventilated, warm room, with an even temperature, and without any draughts.

#### Paragraph 454

DRESS FOR PREMATURE INFANTS. The dress should be of the finest wool flannel, and made as simple as possible. As soon as the premature infant is born, it should be wrapped in a soft warm flannel or eiderdown wrap and placed in the incubator or basket, and the basket placed in a warm room. The best dress is a simple bag about three feet long and twenty inches wide at the bottom, stitched around the neck, without sleeves. It is open at the bottom so that the infant may be changed without any trouble, and long enough to double over and make a sort of a cover reaching to the shoulders.

The child is covered with a light wool blanket, which makes a sort of a hood over the head. The abdominal binder should be made of wool, and the diaper made of cotton material. A warm water bag should be laid under its feet in order to keep them perfectly warm. See that it is properly protected so that it will not burn. The child's feet are generally cold, due to poor circulation.

## Paragraph 455

DIET FOR THE PREMATURE INFANT. Mother's milk is the correct diet for premature infants, and must be obtained at any expense of money or effort. The infant must be fed immediately after birth to avoid exhaustion, and to combat the great initial weight loss. For the smallest infants, give 5 to 20 drops of two-thirds mother's milk and one-third water every thirty minutes with a medicine dropper. If the child retains this, increase the amount to 30 or 40 drops. After twenty-four hours, the intervals are lengthened to an hour.

# Paragraph 456

The following is the diet list as given by Dr. DeLee of Chicago in "The Care of Premature Infants":

FOR INFANTS WEIGHING LESS THAN THREE POUNDS (3 lbs.)  Total Quantity.  1st day, every thirty minutes, 15 drops: water 1 part, milk 2 parts;  2nd day, every hour,  30 drops: water 1 part, milk 2 parts;  40 drops: water 1 part, milk 2 parts;  40 drops: water 1 part, milk 2 parts;  41 day, every 1½ hours,  5th day, every 1½ hours,  6th day, every 2 hours,  7th day, every 2 hours,  7th day, every 2 hours,  1/2 drams: Pure mother's milk;  1½ drams: Pure mother's milk;
FOR INFANTS WEIGHING LESS THAN 3 lbs. 12 oz.
Total Quantity. Every Hour.
1st day 63 grams (2 oz. ½ dr.) 45 drops
2nd day 127 grams (4 oz. 1 dr.)
3rd day 151 grams (5 oz.)
4th day 200 grams $(6\frac{1}{2} \text{ oz.})$ 2
5th day 224 grams (7 oz. 2 dr.) 2 '' 15 m
6th day 230 grams (7 oz. 4 dr.) 2½ "
7th day 263 grams (8½ oz.) 2 "45 m
8th day 281 grams (9 oz.)
9th day 303 grams (10 oz.)
FOR INFANTS WEIGHING FROM 3 lbs. 12 oz. TO 4 lbs. 9 oz.
Total Quantity. Every Hour.
1st day 120 grams (4 oz.)
2nd day 173 grams (5½ oz.) 2½ drams
3rd day 247 grams (8 oz.)
4th day 281 grams (9 oz.)
5th day 312 grams (10 oz.)
6th day 347 grams (11 oz. 2 drams)
7th day 364 grams (11 oz. 7 drams)
8th day 393 grams (12 oz. 5 drams)
9th day 404 grams (13 oz.)

# FOR INFANTS WEIGHING FROM 4 lbs. 9 oz. TO 5 lbs. 4 oz.

Total Quantity.	Every	Hour.
1st day 153 grams (5 oz.)	$1\frac{1}{2}$	drams
2nd day 266 grams (8 oz. 5 drams)	3	6.6
3rd day 299 grams (10 oz.)	$31/_{2}$	6 6
4th day 341 grams (11 oz.)	31/4	6 6
5th day 365 grams (11 oz. 7 drams)		6.6
6th day 390 grams (12 oz. 5 drams)	41/4	6.6
7th day 400 grams (13 oz.)	$41/_{2}$	
8th day 413 grams (13 oz. 3 drams)	43/4	4.6
9th day 418 grams (13 oz. 4 drams)	5	

This diet list can be increased or decreased as the case may require. Judgment must be used as to the amount of food an older child should have—that is, a small older child, that is premature, would require more food than a larger young premature child. A general rule to go by is to give the child all that it can be induced to swallow, yet care must be taken not to over-feed. On the other hand, you must have sufficient nourishment in order to overcome the depressed condition. Feeding must be carefully and consistently practiced. The child should be laid on its right side after each feeding and must not be left alone, but must be kept under constant observation.

#### Paragraph 457

When an infant is not getting enough food, and loses weight, it will have a tendency to lie in a peculiar stupor, have attacks of fainting, sometimes with marked cyanosis. The amount of food should be carefully measured. The infant must be weighed on delicate scales to ascertain its loss or gain. The total amount of food taken by the infant in twenty-four hours should be equivalent to one-fifth of the child's weight. Therefore, a premature infant weighing 3 pounds should be given 9 ounces of milk per day.

#### Paragraph 458

METHOD OF FEEDING PREMATURE INFANTS. If the premature infant can nurse (suck the nipple) and swallow, the milk is given by means of a small vial and tiny nipple. If the child can swallow but not nurse the nipple, the milk is poured into the throat

with a feeding-dropper. All utensils, such as breast-pump, bottle, dropper and nipples, must be thoroughly sterilized before using.

# Paragraph 459

If the child can neither nurse nor swallow, it must be fed by means of the stomach-tube, which is attached to a small glass funnel. The stomachtube used is a small rubber catheter, size No. 8 American for the small infant, and No. 10 for the larger ones. The mother's milk is obtained by using the breast-pump. It is properly diluted and warmed. The infant is placed on the lap, with face upwards and a little to one side. The tube is filled with milk, clamped with the fingers, passed into the throat, and quickly into the stomach. A depth of four inches is usually sufficient. Then the measured quantity of milk is slowly poured in, taking care that air is not permitted to enter. Withdraw the tube with rather a quick motion, and the child is held quiet for a few moments, after which it is carefully placed in the basket or incubator, and carefully watched for a few minutes to see that the milk does not regurgitate and strangle the infant.

### Paragraph 460

Over-feeding is more apt to occur when the stomach-tube is used than any other way. Great care must be taken that no abdominal distention, vomiting or indigestion occurs. Premature infants must be supplied with sufficient water. As soon as the premature infant is able to nurse, it should be put to the breast, as DeLee says: "Nothing can match the life-giving fountain."

#### Paragraph 461

BATH FOR PREMATURE INFANTS. Handle premature infants as little as possible. As soon as the premature child is born, it is covered warmly, and taken to a hot room, and the whole body is anointed with warm sterile benzoinated lard. This is carefully and quickly wiped off with a hot towel, and further dressing is to be avoided if the infant is very weak.

# Paragraph 462

It must first remain several hours in the incubator or basket until it has recovered from shock. For the first week, the whole body is anointed daily with the finest sterile benzoinated lard. The face and buttocks are occasionally washed with warm water. Stronger infants are gently immersed into water at a temperature of 103 degrees F. for a few seconds—not over thirty—then place it on a warm towel for drying. After this the body is anointed with benzoinated lard. The regular bath, as usually given to infants, is postponed until the child is quite vigorous.

# Paragraph 463

CARE OF THE EYES OF PREMATURE INFANTS. The eyes are given very little, if any, attention, except ordinary care. Great care must be taken not to injure or abrade the mucous membranes, as the infant is very susceptible to infection.

# Paragraph 464

CARE OF THE MOUTH. If the tongue is coated, wash the mouth out daily with a very weak boricacid solution, but this is not needed if the tongue is clean. Great care should be taken not to injure the tender mucous membrane.

# Paragraph 465

CARE OF THE NOSE AND EARS. The nose and ears should not receive any treatment, only what would be considered necessary cleanliness. Be careful not to injure the skin or mucous membranes about the nose and ears by any undue manipulation.

# Paragraph 466

CARE OF THE CORD. Care of the cord in premature infants is of great importance on account of preventing any infection, and it must be kept perfectly dry and sterile. Dry gangrene is the favorable way for separation to take place.

### Paragraph 467

CARE OF THE GENITALIA. Great care must be taken in the care of the genitalia in both boys and girls. In girls, the parts must be handled with

extreme delicacy and with antiseptic precaution, in order that the parts do not become infected. In boys, the napkin should be applied loosely to avoid any compression. The buttocks is very tender, and the skin becomes inflamed with the slightest irritation. The parts must be kept scrupulously clean, and the napkin must be changed immediately after urinating or bowel movements.

This is very important in order to prevent the skin from becoming irritated and infected, and if the skin should become irritated it should be thoroughly dried and quickly changed with the smallest amount of exposure possible. The parts are dried by laying a soft cloth on the skin, and the fingers are rubbed over it; then stearate of zinc powder is applied to the affected parts. Let us mention the fact: Never use boric-acid in such cases because it will irritate the skin. In place of the stearate of zinc powder, rice powder that is very fine is also good.

# Paragraph 468

DAILY CARE. Every day the infant is anointed with sterile benzoinated lard, and it is given a general massage. Rub the skin very gently, kneading the muscles of the arms and legs, and bend the joints. This is done with the most extreme gentle care, and when the child is very weak such treatment should be given only every other day. This massage treatment must be employed in order to overcome the torpid state present in premature infants, and cause the blood to circulate more freely in the extremities and lungs. For the same reason, a child should lie first on one side and then on the other. Take the temperature morning and evening per rectum, and more frequently if there is fever.

The infant should be weighed every other day during the time that the benzoinated lard is being applied, and it should be weighed naked on delicate scales. Great care should be taken that the baby does not get chilled. Weigh it in a warm soft blanket that is free from irritation, or a napkin can be used. Both blanket and napkin should be very warm.

# Paragraph 469

The diseased conditions that exist in premature babies are the same as new born infants at term, only more severe, and infection, possibly, is the cause of more deaths than any other one thing in these little mites of humanity. The infection comes through the nasal passages, the mouth, or from the separation of the cord. Infection of the lungs in the form of pneumonia or bronchitis are very common, and both are very difficult to diagnose.

The gastro-intestinal tract often becomes infected. In that case, the symptoms of gastro-intestinal trouble are present—like diarrhea, green irritating stools with offensive odor, fever and vomiting. The digestive tract may become infected through the mouth, impure air, improper food, or from the lack of proper sterilization of bottles, nipples, etc., and the attendants who are careless in regard to asepsis will do much harm.

# Paragraph 470

Simple indigestion often occurs, which is manifested by vomiting, loose stools with curds, with additional loss of weight. In such cases, be sure the infant is not over-fed. The milk must be properly diluted and small feedings given several times at regular intervals. Note if the stomach will retain it. DeLee says the addition of ''Peptic Salt'' to the milk will often correct this condition. Peptic salt is made by mixing 1 part of the finest table salt with 9 parts of the best scale pepsin—¼ grain is given with each feeding.

### Paragraph 471

THRUSH. In premature infants, a sore mouth with white spots formed on it is more common than in full term infants; therefore, to prevent thrush, the demand for absolute cleanliness is imperative. In treating thrush, after each feeding the mouth should be washed with a saturated solution of borax, and this should be done with the greatest care not to injure the delicate mucous membrane. This can be done with a sterile cotton applicator. The surface should be gone over gently, removing all loose material. The spots may be touched daily with 2 per

# CARE AND FEEDING OF INFANT

cent Nitrate of Silver solution, and after applying the silver solution, a drop or two of castor oil put in the mouth will allay the irritation.

# Paragraph 472

BLUE SPELLS. Premature infants often become cyanosis, and they turn blue, cease to breathe, and often die unless given immediate relief. Such conditions are very difficult to treat, because the infant is very weak and not able to keep up the efforts of respiration. A dip in a hot bath, artificial respiration and stimulation with a drop of whiskey diluted with a few drops of sterile water may help the little creature to regain its color and successfully relieve the attack. The cause of these blue spells is exhaustion or anything that interferes with the heart's action, like improper feeding.

# Paragraph 473

If the infant is choking, it should be held up by the legs and obstructions removed from the throat, and if this does not succeed, the same method can be employed by squeezing the chest from before backwards, the same as resuscitating asphyxiated babies, as already explained in the management of the second stage of labor.

# Paragraph 474

The lungs are often in a condition known as atelectasis pulmonum, which means the lungs of the child have not unfolded and the air cannot enter the lungs. In these cases the child generally dies from asphyxia. In such cases the child retains a blue color, the same as blue babies that are born with some heart disease. Unless the child cries, and the healthy pink color of the skin is obtained, it will almost invariably die. Treatment of such a condition is to get the baby to cry.

In conclusion, let us say that if you are successful in saving these premature babies, have no fear but what they will grow up to be vigorous and strong men and women; therefore, every effort should be made to save them.



# PART III

Contains a complete discussion about conditions that are caused by the various diseases common in children, together with nursing treatment; including diet list, formulas, and other practical knowledge about the training of infants and children.



Before taking up in detail the subject of special diseases of children, let us consider the management of a sick child in a general way.

It is not our aim to try to teach the mother or nurse to become a physician, but it is our intention to instruct them and to give them such knowledge that they can intelligently care for and treat all the common ailments of children, and be able to successfully nurse serious cases.

If the child is sick, the mother or nurse should have a suffcient knowledge as to the nature of its ailment to know when to send for a physician, what to do before he arrives, and to carry out his instructions in an intelligent way. Our aim is to teach these facts.

We will give conditions that exist in the child, caused by disease, in a way that will be of most value. Let us begin by teaching how to tell when the child is sick.

# Paragraph 476

1. The position of a sick child is important. Oftentimes at the beginning of an acute disease, the child lies very quiet and in a stupor. When a child wants to sit up, or to be propped up with pillows, or if it wants to be carried in a position with the head and shoulders forward, it is an indication of difficult breathing, which means some trouble with the throat, heart, or lungs.

#### LECTURES OF INTEREST TO WOMEN

## Paragraph 477

2. When a child is perfectly still, assumes one position, and cries when it is moved, tells you that the child is still because the parts become painful in changing position, which might indicate rickets or some inflammatory condition. When children sleep with the mouth open and the head thrown back, it is an indication of difficult breathing, due to enlarged tonsils or adenoid growths.

# Paragraph 478

3. When any brain trouble is present, the head is generally drawn far back and held firmly in that position. Young infants have a tendency to place the hands near the seat of pain; thus if they have an earache the hand is placed to the ear; if the mouth is sore they put the fingers in the mouth; if it is a headache they put the hand to the head.

It must be remembered, however, that the movements of a child's hands are misleading unless verified by the physician's examination and statement, because a hungry child might put its fingers in its mouth and there will be nothing the matter with the mouth. Before a child has convulsions, the thumbs are generally drawn tightly into the palms of the hands, and the toes are straightened or stiffly bent, and remember the soft spot on the head generally bulges in place of being below or on a level with the bones. The condition that occurs in colic, the movements of the child, etc.. is fully explained in that subject.

### Paragraph 479

4. The color of the skin often changes when there is any diseased condition present—as in jaundice it becomes yellow, and the whites of the eyes are also yellow. Remember we mentioned that in young infants the skin may become yellow but it is not a case of jaundice unless the whites of the eyes are also yellow. When an infant is born with heart disease the skin often becomes bluish in color, especially the face.

### Paragraph 480

5. Pale circles around the mouth generally accompany nausea and stomach troubles. Many

withers believe when this cours it is the to withe, but the condition of the stomach and howels produces this effect a great feel oftener than withe. The same has a pale want appearance when there is a laba of proper block supply, as we get in some hidney diseases, miners. The root issue hid improper matrical when the baby's food ines not agree with it.

# Farancina of

face is of little malue in diseases. In clier candidate with severe stamped and cowel amplifies, the face will become sampled and sampled terp rapidly, and any serious disease will cause an expression of distress. When the mostrals more in and out when the cauld breatness, it impartably indicates some lung trouble like presumants. A cauld will often user its eyes half open while sheeping when suffering from any embassed condition, or when it is in pair. Diseases disprises will cause a caevalle or smalling expression.

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T. When there is an embessive sweating of the head imping sleep, it may be a symptom of the beginning of a base of mickets. Tel we have more or less persparation in infants who are in perfect health.

### I or ar com - Li

5. When gus firms in the bivels, the alionen is generally hard and swiller, as we find in pilic or imports indigestion, while in cases of severe inflammation of the brain, diarrhea, or poir nutrition, we often find the abdomen sunker.

# Farancia -1-

9. The breathing of antlines in general is of interest in ascentanning if the haby is sick or well. In groung infants, when awake, the breathing is always slightly irregular. If it becomes decidedly so the brain is generally differed.

Louis infectious fissues a sitem couse a rise in temperature, and the imprecised breathing is very marked 50 or 50 times a minute . especially in

cases of pneumonia. Breathing is very slow in diseases of the brain. Breathing through the mouth tells us there is some obstruction in the air passages of the nose.

### Paragraph 485

10. The pulse rate in infants is of very little value, and it varies so that it is rarely considered. A temperature in a child indicates that there is some infection or disturbance of some sort—yet remember this fact; that in infancy and childhood very little irritation or inflammation will produce temperature as high as 103 or more. Unless the temperature is over 100, we generally consider that the child has no fever, and it is only moderate from 102 to 103. The high temperature is from 104 to 105, and dangerous temperature is above 105. A dangerous temperature is one that continues for some time. A child might have an acute attack of indigestion, and bowels become constipated, which will produce a high temperature very quickly, and as soon as the bowels move the temperature disappears. The temperature is generally lower in the morning and higher in the afternoon and evening. A sudden fall in temperature with children is generally a favorable conditionespecially is this true when accompanied by an improvement of the other symptoms, but when there is a sudden fall in temperature and the condition of the child remains the same, it is very unfavorable. We will mention the temperature conditions in detail when discussing the different diseases peculiar to children.

Remember that when there is an increase in temperature, there is also an increase in the pulse rate and breathing. The increase is not as marked in children as it is in adults. We can generally add about eight or ten beats of the pulse and two or three respirations for each degree of temperature. Some diseases affect the ratio of temperature, pulse and breathing in a special manner—especially is this true in diseases like pneumonia. There are conditions where we have a subnormal temperature—that is, where the temperature is below normal. This

condition exists when there is great exhaustion caused by a hemorrhage or severe diarrhea. We often find a low or subnormal temperature in children who are suffering from insufficient nutrition. In some cases it remains below normal for several days, and yet it does not terminate fatally.

# Paragraph 486

ll. The tongue of the new-born infant is white and generally remains in this condition until there is plenty of saliva secreted. The tongue is generally slightly coated when there is any acute disease, but it is not as important in children as it is in adults.

# Paragraph 487

12. Grinding of the teeth in older children generally tells us that there is some irritation of the nervous system or some disturbance of digestion. It does not occur, as often is believed, when a child has worms.

## Paragraph 488

of some importance in diseases, because when there is an obstruction in breathing it must let go of the nipple in order to get its breath. Sometimes when the baby nurses for a few minutes, and then stops and cries, it is due to a sore mouth, and the nursing is painful. When an infant has a sore throat it generally swallows with a gurgling noise, sometimes stops to cough, and will only nurse a little at a time. When a baby is sick and ceases to nurse, it is a symptom of great weakness, and is not a favorable condition.

### Paragraph 489

14. Highly colored urine in a child or infant, or urine that stains a diaper; urine that becomes reddish after standing; or milky when first passed, are conditions that go with fevers and indigestion. Sometimes it stains the napkin yellow; in that case, as a general rule, the child is not taking enough water. We also have a yellow stain on the napkin when jaundice is present. A mother should also remember that over-feeding with too much beef juice or highly nitrogenous foods will produce a reddish condition of the urine.

# LECTURES OF INTEREST TO WOMEN

## Paragraph 490

15. The condition of the stools, both in health and disease, have been fully discussed under that heading in Part II., and does not need to be repeated. The baby's cry relative to sickness has also been fully discussed in that subject.

# Paragraph 491

16. One difficult thing in the care of children is to give medicine and food according to the physician's instructions. If the child has been trained according to instructions given elsewhere in these lectures, and it has learned the law of obedience, the mother will have less trouble in administering such remedies and giving such food as may be required. When a child has not had the proper training, the nurse or mother is oftentimes compelled to resort to bribery in order to get the child to take medicine or food-promising this or that if they will do so and so. During sickness is no time to train children, and if a child is disobedient, lose no time with arguments, but wrap the child in a blanket that fits tightly around the body, including the arms to prevent interference, and give the child what is necessary for it to have. This is done by inserting the spoon in the mouth when it opens it to breathe. Empty the spoon and withdraw it slowly. Do not leave the spoon in the mouth any longer than necessary, as it prevents the child from swallowing. Let the mother or nurse give the medicine in this manner a few times without excitement or anger on her part, and the infant or child will soon learn that it must take its medicine. In cases of young infants, give only a small amount at a time, as they have a tendency to spit out a greater part of it when a teaspoonful is given. If the spoon is only half full there is much less danger of spilling it, and it can be given with greater ease.

When children fight so hard that exhaustion follows, then the question arises—"Does the giving of medicine do more harm than the medicine does good?" This must be decided by the attending physician. In giving children medicine, let the truth be stated at all times—that is, never tell a child

that a medicine tastes good when it does not. It is a good idea, when giving medicine, to prepare it where the child cannot see you, as it does not become irritable with the thoughts of taking the medicine until it is ready to be given.

When children and infants are not able to swallow large quantities of medicine, or for those that lie in a stupid condition, the medicine may be administered with a medicine dropper in place of giving it with a spoon, and this time the medicine is inserted beside the teeth, and the contents will generally be swallowed. The medicine dropper should have a blunt end, and never place it between the teeth, because a child may bite it, and broken glass in the mouth would be a very unpleasant condition.

When giving medicines that have a disagree-able taste, as most of them do, give a sip of milk or water, a little piece of candy, or a bite of an orange before and after taking the medicine, and this will help to eliminate the bad taste. Oftentimes the medicine can be diluted with a little water, and add a little sugar. This will help to disguise the taste to a certain extent. Too much water should not be added, as it makes the dose to be given too large and more difficult to administer. Under ''Medicines for Children,'' you will note the special instructions in giving certain kinds of medicine.

# Paragraph 492

17. It must be remembered that young children cannot take pills. When a child is old enough to take a pill or tablet, it will be easier to take if it is placed in a little jelly or preserved fruit. It is a good practice if the mother will play doctor with her children, and make little pills out of bread, place them in a little jelly, and teach the child to swallow them.

### Paragraph 493

18. Also teach a child to have its throat examined by taking a spoon and have it open its mouth, press down the tongue and examine the throat, and in this way a child can soon be taught to have its throat examined without any resistance. Also examine the nose and ears, and if the child is taken

sick it can then be examined and treated by a physician with very little, if any, difficulty.

# Paragraph 494

19. Every mother should be supplied with a one or two-ounce graduate that will give the right measurements, and all medicine should be measured correctly. Spoons vary so in size that they are unreliable. The proper dosage and the time of giving the medicine should receive the mother's attention, because the frequency and dose to be given, of any medicine, can only be determined by the physician.

### Paragraph 495

20. Not only is it necessary to administer medicine to sick children, but they also require nourishment, and the feeding of a sick child is often as important, if not more so, than the giving of medicine, and you will find in many cases it is just as difficult. The way to quench a child's thirst, or give it nourishment, is to have only a small amount in a small glass, and it will probably take it all. If you approach a sick child with a full glass of milk, the chances are it will take very little.

When there is little desire for food, milk may be administered when a child calls for a drink of water, and a little sugar or vanilla may be added. A little salt may be added to boiled milk. All these help to make it more tasteful. Never discuss before a child about its food, but fix up what you want it to have and administer it at certain times in given amounts.

# Paragraph 496

21. There are three very good rules to remember when feeding sick children: First, never give any new foods, or experiment, you might say, with foods when a child is suffering with diseases of the stomach or bowels; second, at the beginning of any illness give little or no nourishment; third, when any vomiting occurs, stop all feeding until the physician is consulted. The formula for the proportion of different foods, as given under that heading, will be found very useful in administering food to sick children.

# Paragraph 497

22. A few years ago it was generally believed that a sick child should not have very much water. We remember in the treatment of measles, we were not allowed water at all, but today we allow children to have all the pure water they want, providing it does not interfere with the taking of nourishment. If there is any special reason given by the physician why a child should not have all it wants, then give it very little in a small glass and it will be satisfied.

# Paragraph 498

23. When a child is sick, there is one thing that mothers, nurses, visitors, and members of the family do not consider as seriously as they should, and that is the elimination of noise. Everything should be quiet around a sick child, because infants and children are not old enough to make this request, and they do not realize that their nervousness and headaches are due to this unnecessary loud talking, heavy walking, shifting of the furniture, or the playing of other children.

### Paragraph 499

24. The little patient should be placed in a position that is most comfortable and encouraged to remain in that position. A child who has lung trouble should never be raised up rapidly. In fact, when there are any movements of a sick child of any kind, they should be very slow and gentle. Some diseases require that the child's position be changed quite often, and it should not be allowed to lie in one position too long, in any lingering sickness, on account of the formation of bed-sores.

### Paragraph 500

25. We wish to warn mothers and nurses about keeping children too warm when they have fever or during the hot weather. The covering should be light under such conditions, and when a child is old enough it should be consulted as to whether it is too warm. An infant with a fever should be kept in its crib as much as possible; especially is this true in hot weather, as it only aggravates the case when it is held on the lap of the mother or nurse.

When an infant or child is taken up, it is wrapped in a blanket. We should not forget to have the chest and arms protected during sickness, or when a child is getting well and sitting up in bed. It is well to have clothing suitable for the night and another outfit for the day that protects the chest and arms as well as other parts of the body.

# Paragraph 501

26. Cleanliness in a case of sickness with children is very necessary, and a child should be sponged all over at least once, if not twice, a day with soap and water or alcohol and water. A warm tub-bath may be used in many diseases, but in eruptive fevers, mothers should only give sponge baths. Children that have eczema should not be washed or sponged off with water, and it is well in all cases of sickness to get directions from the physician as to the time, kind, and temperature that the bath should be given. The bed linen should be changed often, and should be warmed in cold weather if necessary. When opportunity affords, it is well to have two beds-one for day and one for night. This is distinctly restful to the little patient and gives it great comfort. The mouth should be properly cleansed with a good mouth wash like weak solution of listerine or glycothymoline.

There is no case of sickness but what there should be ventilation and plenty of fresh air. Various applications like dry heat, mustard plaster, or turpentine stupes, that are ordered by the physician, are applied according to directions given on another page. Care must be taken in applying hot water bottles—see that the skin is well protected.

# Paragraph 502

27. In some fever cases the ice-bag is applied to the head, and may be used sometimes, under the physician's directions, for the relief of pain. In purchasing an ice-bag be sure that the rubber is very thin and pliable. The bag should not be more than half full with small pieces of ice. If the ice-bag is not too full of ice, it can be applied to the parts

quite accurately. As a general rule, children and infants do not tolerate cold applications, and we do not think it is used very extensively on them, other than applying the ice-bag to the head in a case where the child has high fever.

# Paragraph 503

28. The care and flushing of the bowels have been thoroughly discussed under "Colon Irrigation". The diet for sick children had better be ordered by the attending physician. Remember the three maxims we gave you in regard to feeding a sick child.

# Paragraph 504

29. It is very important that the nurse and mother be fully impressed as regards the proper preparation of food for sick children. A physician should give definite instructions as to how much food, its form, and how often it should be given. It should be written out in detail by the attending physician. Its preparation should be carefully attended to by the nurse or mother, and it is a good practice to keep a record of the food—that is, the amount taken, the kind, and frequency, as well as to keep a record of the medicines given. Care should be taken that neither too much or too little be given. It is very easy to err with either extreme. In older children, to a certain extent, the child's wishes can be satisfied. The physician would obtain from the nurse or mother the child's likes and dislikes. The nurse or mother that is tactful along these lines is of inestimable value in preparing and giving nourishment to a sick child. A careless or stupid mother or nurse in this respect is a source of danger.

# Paragraph 505

30. Nurses and mothers should be trained along the line of practical dietetics, and should learn how much food is required, the kind to give, and also the time to give nourishment in the different diseases and types of patients. When food is required it should be given at regular intervals, whether the patient is conscious, unconscious, or semiconscious.

## Paragraph 506

31. Convalescing patients, especially children, often require a great deal of tact in fostering the appetite. Such children are generally very fastidious when weakened by disease. The manner in which food is prepared and served has a great deal to do with the patient's appetite; especially is this true with adults. But even with children, the sick room should be orderly, and allow no food in the room either before or after serving a meal. Neither should dishes or utensils remain, and all food and drink should be served from scrupulously clean dishes and glasses. Have everything dainty and attractive in appearance. Any dishes that can be garnished with some sort of green sprig should not be omitted. Linen and napkins should be perfectly clean, in fact spotless, and the outside of glasses and cups containing food should be wiped perfectly dry before given to patients.

# Paragraph 507

32. All foods should be fresh and freshly prepared. Food that is allowed to stand until it gets stale, like some of the drinks (eggnog for instance) then given to a patient, will often have a tendency to forever turn a patient against such a form of nourishment. Food should not be prepared in the presence of a patient. The nurse or mother should be satisfied that it is properly seasoned and prepared. Food may be tasted, but not in the presence of the patient (nor should the same spoon be used by the patient), to determine if it is alright. If anything wrong is discovered, it can be remedied before it is given to the patient.

### Paragraph 508

33. The position of the patient while taking nourishment should be as comfortable as possible, and one in which they will not tire before the meal is over. This is as important as the proper selection, preparation, and administration of the food, because the patient is weak, and all food should be given in such a form that a patient may take enough without becoming overly tired. Children that are able to sit up, may be provided with a tray on which to place the food.

#### Paragraph 509

34. Sick children should be watched carefully while taking nourishment. Have the food well masticated; see that each mouthful is swallowed before another is given. When patients are asleep, especially at night, to waken a child for nourishment requires special judgment. Some children are more in need of sleep than food. This should be decided by the physician in charge. If a child does not go to sleep quickly after taking food, it may be a better plan to wait until it weakens before feeding it. If the child is seriously ill, it is generally disturbed only a few minutes by taking food. In fact, the giving of warm liquid food may often induce sleep.

## Paragraph 510

35. It is very essential that the child's mouth be kept perfectly clean, and it is a good plan to wash the mouth before and after taking food. When the mouth is dry, it should be moistened from time to time. A little glycerine, water, and lemon juice will be found very good. Sometimes patients are helpless, and then the mouth should be cleansed with a cotton swab on a wooden applicator, or the cotton may be wrapped around the finger. The cotton should be saturated with some antiseptic solution like boracic acid, which makes an efficient mouth wash. Abbott's Menthol Compound tablets (one dissolved in a half a glass of water) is an excellent mouth wash in cases of fever, tuberculosis, etc.

### Paragraph 511

36. In cases of infectious fevers, and diseases that are contagious and communicable, a covered boiler should be used to disinfect all dishes and utensils used, and the dishes should be boiled in bicarbonate of soda solution, allowing them to boil a half an hour. Great care should be taken with dishes, towels, etc., that the disease is not transmitted to healthy children.

#### Paragraph 512

37. When possible, it is very convenient to have a diet kitchen temporarily arranged close to the patient's room, especially in private homes.

# LECTURES OF INTEREST TO WOMEN

This is very convenient, and assists greatly in the preparation of food for sick children.

At this time, in connection with the above remarks, it would be proper to consider the various diseases most common in childhood. We will discuss them in a general way, including the nursing treatment with more or less detail, which will be of great value to the mother or nurse in caring for children that may have any of the acute infectious diseases, as well as other ailments, habits, and conditions that occur in childhood.

### SCARLET FEVER.

### Paragraph 513

Scarlet fever is an acute infectious disease. It is a specific infection and is very contagious. It is one of the most dangerous of any of the acute infectious diseases of childhood, on account of being associated with so many severe complications. It is communicated by direct exposure, by a third person, or personal contact in the way of food, clothing, toys and books. The disease is not transmitted, according to our best authority, through the air.

### Paragraph 514

The germs that cause the disease live for a long time; cases have been reported where they lasted for months and even years. One case we know of where the room was not properly disinfected after a child had a very severe case of scarlet fever, and the walls were repapered. Years afterwards another family who had two small children moved into the house. The paper was torn off the wall, which caused the house to become infected with scarlet fever, and both children contracted the disease and died.

# Paragraph 515

It is so contagious that great care must be taken to disinfect all articles of clothing used in connection with the case, or else everything should be burned, and the room must be thoroughly disinfected. As soon as the child shows any symptoms of scarlet fever it should be put to bed, and remain in bed until the peeling of the skin is complete,

which will take, from the beginning of the disease, from four to six weeks, and in many cases a great deal longer.

# Paragraph 516

In this country (America) the disease is more frequent in the fall and winter months than it is during the summer, yet it occurs at any time and the cases are just as severe in the summer as they are during the winter.

# Paragraph 517

The majority of cases of scarlet fever occur between five and ten years of age, and the next frequency is between two and five years. Scarlet fever is common in children up to twelve and fifteen years of age. The period of incubation, that is from the time the child is exposed to the disease until the first symptoms appear, is from a few days to a week, some cases a few days longer, all depending on the susceptibility of the individual.

## Paragraph 518

The mortality in scarlet fever is about ten per cent. The first symptoms noticed are often very acute. The child may seem perfectly well, and within a few hours time will complain of a sore throat, will vomit and have a high fever, the pulse will become full and rapid, and from 24 to 36 hours from that time the rash appears. It is fist noticed on the neck and chest. It is of a bright scarlet pin-point flush, and occupies the sites of the hair follicles. The rash extends from above downward, spreading in a few hours to the arms. Usually in 24 hours after its first appearance the rash reaches the trunk, abdomen and legs.

### Paragraph 519

In comparing the different eruptive diseases, you will notice there is a marked contrast between scarlet fever, measles, chicken-pox, or smallpox; that scarlet fever rash is much less marked upon the face and cheeks; that is, the skin of the face immediately about the nose or mouth remains free from the eruption. The rest of the skin on the body becomes a scarlet red, and if the finger is drawn over

the skin, it leaves a white line. The rash generally lasts from five to six days, and in mild cases it may last a much shorter time.

## Paragraph 520

As the rash begins to disappear, the skin starts to peel off. This peeling requires, as mentioned, from two to six weeks, or longer. The scaling or peeling off is a fine flaky scale; sometimes it comes off in large patches. The duration of the peeling depends largely upon the severity of the case, and the peeling remains longer where the skin is thick, like on the hands and feet. These fine flaky scales afford means for carrying the disease from one person to another.

### Paragraph 521

In scarlet fever we have a varied fluctuation as to the severity of the disease; some cases are very mild, others very severe, and the complications of scarlet fever are to be dreaded even more than the disease itself. It affects the kidneys, the ears, lymphatic glands, the eyes, oftentimes swelling of the tonsils and side of the neck, and inflammation of the mucus membrane of the throat.

The fever generally subsides at the time the rash disappears. Sometimes the fever remains longer, especially the child will have a temperature in the evening. Some cases may be very mild and have very severe complications, while other cases may be very severe and have no complications.

# Paragraph 522

NURSING TREATMENT:—Nursing a case of scarlet fever, by a nurse or mother, requires the greatest care in every detail, which is necessary for the welfare of the patient, as well as preventing complications and the infection of other children. The patient and mother, or nurse, must be isolated, and she should wear a dress that can be washed. Keep the hair covered with a suitable cap, and allow no other children or members of the family to enter the room.

# Paragraph 523

The patient must have plenty of fresh air, and the temperature of the room should be in the neighborhood of 70 degrees. The patient must remain in bed and be protected from all draughts. A warm sponge bath should be given twice daily, morning and evening. The warm bath has a good effect in eliminating any profuse perspiration, also controls the fever. Alcohol and warm water in proportion of a few tablespoonfuls of alcohol to a basin of water makes an excellent solution for the bath.

# Paragraph 524

The diet in scarlet fever is important on account of preventing inflammation of the kidneys. Authors differ in regard to this point, but the weight of authority is in favor of giving a strict milk diet during the height of the disease, and a mixed milk and farinaceous diet during convalescence. It is by far the safest. If the exclusive milk diet is in any way objectionable, it can be diluted with line-water, or a carbonated water. If it disagrees with the patient, it may be peptonized. If milk becomes distasteful, it can be mixed with larley water.

# Paragraph 525

It is a good idea, when necessary, to change from the milk to oyster or clam broth, but do not allow the patient to have any of the oysters or clams. Barley water, orangeade, or lemonade may be given freely. Vanilla ice-cream or lemon ice, both plain, may be given in small quantities. Finely cracked ice, or shaved ice in small quantities, flavored with a little lemon or orange juice, makes a most grateful addition to the diet.

Let the diet be as simple as possible for three weeks or longer, then add additional foods from day to day. Great care should be taken in scarlet fever patients in regard to the diet, as carelessness in diet may cause severe nephritis in a very mild case of scarlet fever. During convalescence, the diet should be gradually increased. The increase in the diet may be made according to the following list: milk-toast, junket, custard,

### LECTURES OF INTEREST TO WOMEN

farina pudding, oranges, rice pudding, baked apple, bread and milk, sago or tapioca pudding (with or without apple), cornstarch pudding, and boiled custards.

### Paragraph 526

When there is any kidney trouble, a liquid diet composed mostly of milk should be given for a month or six weeks. When returning to a meat diet, first allow only a small quantity of boiled or baked fish, soft part of oysters, soft-boiled eggs, and meats that are easily digested—such as chicken, raw or very rare beef in small quantities. Remember that during the height of the disease, meat extracts or broths containing meat should be avoided.

### Paragraph 527

The bed linen should be changed each day. The eyes should be protected from the light, that is, direct sunlight, if the room is located where you get plenty of sunshine (and if this is possible so much the better). The ice-cap should be placed on the head while the fever is high. When the eruption causes itching that annoys the child, the body should be rubbed with sterile olive oil, cold cream, carbolized vaseline or melted cocoa butter. All are very good; possibly cocoa butter is the best. The mouth and throat, in scarlet fever cases, should receive special attention, and the teeth should be thoroughly cleaned two or three times a day with a brush and boracic acid solution.

#### Paragraph 528

It is a nurse's duty to pay special attention to the kidneys. As a rule the urine is scanty, and it is necessary to give special attention to the kidneys in order to get the proper elimination of the poison. Lemonade is very agreeable to the patient, and also serviceable in stimulating the secretion of urine. See that the child drinks plenty of water; keep the kidneys active. See that the bowels move two or three times a day, using some of the saline laxatives like the one put up by Abbott, or citrate of magnesia. Give one or two teaspoonfuls of Saline Laxative in half a

glass of water once or twice a day, or one to two tablespoonfuls of citrate of magnesia as needed. Give saline enemas if necessary.

## Paragraph 529

NOTE.—At the beginning of scarlet fever, or when the child begins to have the first symptoms. have it seen by the family physician, or child specialist, in order that the correct diagnosis may be made, and the child may receive the proper medical treatment. Remember that scarlet fever requires watchful care, both from the physician and nurse, in order, if possible, to avoid complications. Do not forget that proper disinfection should be carried out in every detail at the close of the case. The child should have a bath with a solution of bichloride of mercury 1-5000, including the scalp, carried into another room and dressed in clean clothes, and should remain in the house for a few days before allowing it to go out of doors. The room in which the child was sick should be thoroughly fumigated and carefully cleansed as directed by the attending physician or health department. nurse or mother who nursed the case, before going out, should have the same bichloride bath as given to the child, with a complete change of clothing.

#### MEASLES.

# Paragraph 530

Measles is an acute infectious disease, very contagious, and associated with a skin eruption and fever. Measles occur in children of all ages, but it is not as common in infants under one year of age as it is in later childhood. It is communicated, as a general rule, from one person to another. We suppose it might be transmitted by the third person, but such a thing is very rare.

# Paragraph 531

Measles is caused by specific micro-organism, the character of which we are not very familiar with. Children can contract measles three or four days before the rash appears on the skin, and the concontagion continues until all the scale-like par-

ticles of skin come off. Some children take measles very easily, while others require more or less intimate contact.

### Paragraph 532

A child who has been exposed to measles will show the first signs in from nine days to two or three weeks; generally it is along about the ninth to the fourteenth day. At the beginning of a case of measles the child's condition resembles that of a common cold; that is, there is a running of the nose and eyes, dry cough, sneezing, and the child feels sick and often feverish, or sometimes it has a slight chill. This condition lasts for about three days, when the skin eruption begins to make its appearance on the face and neck, and is often seen at the beginning of the fourth day.

#### Paragraph 533

The temperature may vary a great deal, being very high at first, and then drop to almost normal on the second or third day, when the temperature will take another rise as the rash appears. After the rash is well out on the fifth day, it will remain out for about two days and then begin to fade in order of its appearance. After the rash fades the skin peels off in very fine bran-like particles. It requires from eight to ten days for this peeling to take place.

### Paragraph 534

The character of the rash is very pronounced, and quite different from any other eruptive skin disease. It is of a dark red or purplish color, and the blotches may be round, oval, or irregular, and the skin between the rash remains normal. The eruption will extend all over the body, including the palms of the hands and the soles of the feet. It is first a small red spot, which continues to enlarge until it becomes large blotches, and it leaves a distinct area of normal skin between the eruptions. Sometimes the blotches run together, making large ones. The face becomes swollen more or less when the rash is at its height, and we have seen some cases where the eyes were almost closed at this time.

A patient suffering with measles usually has a cough that is quite troublesome. The eyes become inflamed, the urine is generally scanty, the tongue is coated, and the breath very offensive. When the rash reaches its height the constitutional systems generally subside.

## Paragraph 535

Among the complications that are often met with in measles is laryngitis, which is an inflammation of the throat. This is more or less frequent, and oftentimes fatal. It may occur very early in the disease. Broncho-pneumonia is the most frequent and most fatal of any of the complications of measles. Generally three weeks time is required to elapse before the child who has had measles is permitted to mingle with healthy children, and the child should be quarantined during that time.

# Paragraph 536

NURSING TREATMENT:—The nursing treatment consists of hygiene and diet. The temperature of the room should be no less than 68 degrees F. and not more than 74 degrees. Do not bundle up the patient, or keep the room very hot, because this will have a tendency to cause the child to take pneumonia. Remember that over-heated rooms cause more trouble during the treatment of acute lung troubles than any other one factor.

# Paragraph 537

Place the child in a room that is well supplied with fresh air and light, turning its back to the light so that the glaring sun rays will not strike the child's eyes direct. To keep the room dark is practically of no value, and it does not protect the eyes. Give the child plenty of water to drink. The mouth and teeth should receive special attention—keep them very clean. Wash out the eyes with boracic acid solution. Do not overload the child with bed clothes, or keep it too warm. At the same time the child must be kept out of all draughts.

### Paragraph 538

The child should receive a warm sponge bath daily, followed with a good rubbing of the entire

body with cocoa butter. The diet should be light, and food that is easily digested, largely liquids, soups, broths, etc. Such drinks as grape juice, orangeade, lemonade, or a small amount of ice cream are especially valuable to relieve the thirst.

# Paragraph 539

If the fever is high, food should not be given too often, as we know fever conditions impair digestive functions. If a child has been fed every three or four hours, it is a good idea, under such conditions, to lengthen the time to four or five hours, especially while the child has fever. Pure milk should be given to an older child, but a young infant who has been receiving only pure milk should receive half milk and half oatmeal water. If it has been fed every three hours, it is beneficial and wise to try every four hours, especially while the child has fever. Do not forget to let the child have plenty of water.

# Paragraph 540

NOTE: Measles, like all other acute infectious diseases, requires the services of a physician, and every case should be under his care, in order that he may watch for any complications which may arise, and give such special orders in the nursing of the case as it may require.

#### WHOOPING COUGH.

#### Paragraph 541

Whooping cough is one of the common infectious diseases of childhood, characterized by a paroxysmal cough or whoop, and children of all ages may contract it; even young infants are especially liable to have it if exposed. Always keep a child with whooping cough away from other children, because it is very contagious from the first, and the infection continues to last while there is the least whoop or cough, which generally lasts from six weeks to two months, and the child should be quarantined during this time.

#### Paragraph 542

It requires from two to twenty days after the child has been exposed before the symptoms develop,

yet as a general rule, after fourteen days have passed since the exposure, and no cough has developed, we can say with a marked degree of certainty that the child will not have the disease, and it is free from the infection.

# Paragraph 543

When a child begins to have a cough that occurs at various intervals, and most frequently at night, we always suspect whooping cough; especially is this true when the cough increases in severity from day to day. At first a child who is taking whooping cough has a catarrhal condition similar to taking a cold. It is an irritant cough; the child has no fever at the beginning, no vomiting, very little (if any) expectoration. The cough is more severe at night than it is during the day, and the child is very restless.

After the second or third week of such an infection, the cough appears in spasms and ends in a whoop. During the cough or paroxysm, the face often becomes flushed or cyanotic in appearance. Sometimes the coughing ends in vomiting, and when the coughing is very severe, it often causes nosebleed. This whoop stage lasts from three weeks to six months.

# Paragraph 544

The cause of whooping cough is a specific micro-organism. Children with catarrhal conditions, enlarged tonsils and adenoids, are very susceptible to whooping cough. Any diseased condition of the lymphatic glands, tubercular and syphilitic children, poor hygienic surroundings, children living in congested districts where there is very little sunlight and fresh air, and infants who are artificially fed are all more susceptible to whooping cough than the child who has normal health and lives under proper surroundings.

#### Paragraph 545

The severity of the case of whooping cough depends on how well the child is able to retain the food, and the amount of rest it gets, and the freedom from any complications. If we can maintain the child's strength with the proper food and assist

nature in securing rest at night, we have accomplished two very important factors in the care of the child who has whooping cough.

# Paragraph 546

NURSING TREATMENT:—The nurse or mother who has the care of a case of whooping cough can do a great deal for the child, and you should be familiar with the requirements in such cases. Fresh air, that is open air treatment, if the weather will permit, to be continued night and day, is of the utmost importance. In stormy weather when the child cannot be kept out in the open air, it should remain in the house with the windows wide open. In winter time, with the body properly clad, it can receive the open air treatment as well as in the summer time, and remember that fresh air for the patient suffering with whooping cough will do more for the child than anything else you can do.

## Paragraph 547

If you will note the number of coughing spells, and their severity, that occur in the 24 hours, as the case progresses you can tell the improvement that is taking place. If the child vomits frequently and does not retain its food, then it must be fed at frequent intervals, and not so much at a time.

# Paragraph 548

The diet that is most beneficial in such cases should consist of foods that are easily digested and contain the most nourishment. Infants should have peptonized milk in place of the usual formula. Older children's diet should consist largely of raw scraped beef, custard, buttermilk, ice-cream, orange juice or yolk of egg beaten up with milk, and these foods should be given immediately after the coughing, in case the child has vomited food previously taken.

### Paragraph 549

In the nursing of whooping cough, you will find cases where the question of giving the child sufficient nourishment becomes a serious one, and the diet should receive special attention. Another

thing to do is to relieve the distress caused by coughing. This is done by applying an abdominal support, one that fits very snug, and oftentimes an adhesive bandage of zinc oxide snugly applied around the ribs on both sides will give relief. Such a bandage may be left in position for several days. It is placed next to the skin and must be examined carefully each day, and when it causes too much irritation of the skin it must be removed.

# Paragraph 550

Whooping cough often proves fatal, especially with infants, and never recommend or allow mothers to expose their children to whooping cough with the idea of 'just getting it over with.' Such a practice should not be recommended.

So in conclusion, you have three things to do in whooping cough; that is, see that the child has plenty of fresh air; see that it is properly fed, and that it receives sufficient nourishment and retains it; and assist in relieving pain, caused by the coughing, by using a properly fitted abdominal binder or support, or the adhesive bandage.

As whooping cough is an acute infectious disease, the room in which the child sleeps should be disinfected carefully, and especially is this true after the child has recovered.

### Paragraph 551

NOTE: All cases of whooping cough, require more or less medical attention, as severe cases require more or less supportive treatment, which should be prescribed only by a physician. Vaccine is used and recommended by many physicians, and no doubt has its value. The same can be said of drugs that assist in controlling spasms and give the child rest at night, and control its general strength.

#### DIPHTHERIA.

#### Paragraph 552

Diphtheria is one of the acute infectious diseases in which we are able to determine the exact cause. It is a specific micro-organism that is

known as Klebs-Loeffler bacillus. It is a disease that is mostly met with in children. It is occasionally seen in young infants, but most frequently occurs between the fourth and tenth year. Children are especially susceptible to diphtheria between the ages of one and five years.

## Paragraph 553

It is transmitted from one person to another by direct contact, by a third person, clothing, toys, food and wall-paper (similar to scarlet fever infection), and the infection is capable of living an indefinite length of time.

Diseased conditions of the tonsils and children with adenoids afford a fertile field for the infection of diphtheria, and it is wise to keep a child's throat in as healthy a condition as possible in order to guard against the disease, thus preventing the child from becoming infected. The mortality in diphtheria ranges from 7 to 25 per cent. with the use of antitoxin; without antitoxin the average is much higher.

# Paragraph 554

The infection of the disease causes a membrane to form in the throat and nasal passages, which has a yellowish white appearance, and it is firmly adhered to the parts affected. It is a disease that has a marked effect on the nervous system, as well as the heart, spleen, lungs, and liver. We have different types—those that are considered mild, and others that are severe, as well as the septic type.

A child who has been exposed to diphtheria generally shows some symptoms in from two to five days—generally within a week after the exposure the disease will be well developed. The first symptoms noticed in ordinary cases of diphtheria are fever, loss of appetite, a general tired, worn-out condition, with sore throat, and if the mother or nurse will examine the throat when the child complains of the above symptoms, after it has been exposed to diphtheria, she will notice that the tonsils are swollen and perhaps have some white spots

on them, but nothing more can be seen. Within 24 hours, a white membrane appears on one or both tonsils, and very soon may extend to other parts of the throat.

The above symptoms continue, and the glands at the side of the neck may become swollen, and a discharge from the nose occurs. The membrane that forms on the throat is not always alike; sometimes it may be that only a thin gray membrane is located on one tonsil, or maybe both sides, and then again the membrane may be a thick grayish color firmly adhered to the tonsils, and all the rest of the surrounding tissue be swollen more or less. One thing to bear in mind in diphtheria is that the soreness in the throat is not marked, and generally the swallowing is not so difficult as we get in ordinary throat troubles like tonsillitis.

# Paragraph 555

Diphtheric membrane grows very rapidly, and unless given proper treatment, it is apt to spread upon the surrounding mucus membrane, extending up into the nasal passages, or down into the wind pipe, and when this latter condition occurs, there develops what is known as membranous croup. The child becomes hoarse and, if the disease continues, breathing becomes very difficult, and the case resembles a severe case of croup. This form of diphtheria is very dangerous and must receive the proper medical attention if the child is to be saved. One attack of diphtheria does not immune a child from another, but rather makes it more susceptible.

# Paragraph 556

NURSING TREATMENT: A nurse or mother who has the responsibility and care of children, as soon, as there is any membrane formed in the throat, or even yellow spots are seen on the tonsils, should summon medical aid at once. No mother should attempt, under any circumstances, to try to treat any throat conditions herself.

A child should be put to bed, and no other children should be allowed to come near until a physician has made the proper diagnosis. If this is done, the mother may save her other children from

# LECTURES OF INTEREST TO WOMEN

the disease in case it proves to be diphtheria. Antitoxin has given wonderful results in the treatment of this disease, and the parents should not object to its use.

It is the nurse's or mother's duty to see that the bowels move every day by giving some simple laxative like Phillip's Milk of Magnesia, or whatever may be ordered by the physician. The mouth and teeth should be kept clean, and the urine examined occasionally by the nurse or physician.

The child must be kept quiet in bed, and the diet should consist of milk and broths at first, and gradually return to solid foods. Careful management in the diet in diphtheria is of the greatest importance, because we must maintain the patient's nutrition, or the body will not be able to withstand the effects of the poisons that are introduced into the circulation.

### Paragraph 557

If a nursing infant should become infected, some authorities (Koplik for one) advise that the child be taken from the breast, and the milk obtained with a breast pump and fed to the child with a bottle or spoon, thus preventing infection of the breast. However, if the mother has been rendered immune, the danger of breast infection is very slight.

When there is fever, the food should be liquids at regular intervals, such as milk (plain or with lime-water), also peptonized milk, albumin water, liquid peptonoids, soups, gruels, and malted milk, which constitute the menu for liquids. Sometimes semi-soldis are swallowed even with greater ease than liquids, and then well-cooked cereals, gelatin, custards, soft-boiled or poached egg, or milk toast may be given, also ice-cream in small quantities.

### Paragraph 558

If for any reason, the patient cannot swallow, we must resort to nutritive enemas. When it is necessary that the physician perform intubation in cases of membranous diphtheria, there is no special rule for feeding these cases, or changing the diet. It is a good idea to place the child's head lower than the body, as recommended by Castelberry, and in this

position the swallowing becomes easy. The child's head may lie across the nurse's or mother's lap with its head thrown well back and down.

In feeding diphtheria patients, it must be remembered that food may be refused because of nausea, or because the child has no desire to take anything, as well as to any actual difficulty in swallowing.

## Paragraph 559

The fever, generally speaking, is never very high in diphtheria, and it is best controlled by sponge baths with a little alcohol in luke warm water. The general nursing requires keeping plenty of fresh air in the room, clean linen, etc., which should be done in any case of sickness, together with the physician's orders.

NOTE: Diphtheria is very often accompanied by serious complications, and let us impress upon you the importance of medical aid at the beginning of any throat trouble, and if it should prove to be diphtheria, then antitoxin can be administered early in the disease, and in sufficient amount, so that the child is more likely to escape such complications as paralysis, broncho-pneumonia, kidney diseases and heart disease.

The infection is so contagious, and of such long life, that it is absolutely necessary that the greatest care must be taken in disinfecting and fumigating the room and everything in connection with treating the child. It should have a bichloride bath (the same as in scarlet fever) and be freshly dressed before it is allowed to communicate with other children. This fumigation, when possible, should be under the supervision of the Board of Health.

#### MUMPS.

## Paragraph 560

Mumps is one of the acute infectious diseases that is characterized by swelling on the sides of the face, just in front of, and below, the ear. This disease affects the parotid glands. It occurs more frequently in cold and wet seasons than it does in summer. It is a disease that occurs all over the

world, and children of any age may have it, but it occurs more frequently between the ages of 6 and 15 years. Boys are more liable to an attack than girls. Children as a rule are not as susceptible to mumps as they are to some of the other infectious diseases.

After a child has been exposed to the infection, the appearance of the disease does not occur until from 14 to 25 days. The period of incubation is usually about three weeks. The infection occurs by contact from one person to another, and children should be quarantined until the swelling is entirely gone, and for several days (about a week) after the child seems perfectly well.

The disease is ushered in with a swelling and pain of the parotid gland, accompanied with fever, which is oftentimes quite high (104 degrees or more); generally the temperature is only about 100 to 101 degrees. The swelling extends in front of, below, and behind the angle of the jaw. It also spreads forward on the cheek and downward along the neck—the center of the swelling being immediately under the lobe of the ear. The child has a loss of appetite, often vomits, and generally has pains in the legs.

One or both sides may be involved, either at the same time or at different intervals; that is, one side may be affected and the swelling begins to subside, when the other side becomes affected. The swelling and pain is often so severe that the mouth cannot be opened very wide.

The disease is self-limiting, the swelling lasting only four or five days, and inflammation never terminates in suppuration. Death rarely, if ever, is caused by mumps. The complication that occurs most frequently is inflammation of the testicle. This generally occurs when the disease is prolonged, and the patient has been up and around more or less. The orchitis generally lasts several days, and may be prolonged several weeks.

#### Paragraph 561

NURSING TREATMENT: The nursing treatment of mumps is very simple. Keep the child in bed as long

as it has any fever, and as long as the glands are swollen it should be confined in one room. Keep the bowels regular with Phillip's Milk of Magnesia; or some other simple laxative.

The diet should consist mostly of liquids and gruels, including milk, while the child has fever and the swelling is very great, because the mouth can only be opened a little, and solid foods cannot be taken at all where there is marked swelling and a great deal of pain. If the fever is high give alcohol sponge baths, and place an ice-bag on the child's head. Hot fomentations in some form will assist greatly in relieving the pain, and are well borne by the patient. The use of flaxseed meal poultice. towels wrung out of plain hot water, or warmed antiphlogistine may be applied; especially using the antiphlogistine at night, as it does not require changing as frequently as the poultice or hot fomentations—they should be changed at least every half hour. Give the child plenty of water to drink, which will have a tendency to relieve the dryness of the mouth and throat.

NOTE: When the above treatment does not give relief, it is well to consult the family physician, and he may prescribe what is required to control the fever, or any medical applications to be applied locally. If any complications arise notify the physician at once.

#### CHICKEN-POX.

#### Paragraph 562

Chicken-pox is another of the acute infectious diseases which generally occurs among infants and children—rarely seen in adults—and it generally occurs between the second and tenth years of age. It is a specific infection which is characterized by an eruption of vesicles that appear over the entire body. This skin eruption appears in successive groups, and generally lasts from four to fourteen days. Some cases are very mild, while others are very severe.

The little vesicles are transparent and have thin walls, and when rubbing the finger over them they feel like little shot buried under the skin. They first contain a fluid-like serum, and are very easily ruptured. In some cases only a very few of the vesicles appear, while in others they may be completely covered. One attack usually immunes the child from another during the rest of its life.

One point to remember in chicken-pox is that during the height of the disease, all stages of the eruption may be seen on the same part of the body—that is, the beginning of the visicle, others fully developed, and some dried up. The eruption generally appears on the face first, and spreads rather slowly to other parts of the body. The vesicles are not uniform—some are small and others may be quite large.

Children with chicken-pox have very slight fever, and oftentimes are not sick enough to go to bed. If the above points are kept in mind it will not be difficult for you to diagnose a case of chicken-pox.

## Paragraph 563

NURSING TREATMENT: While chicken-pox is a very simple disease, you should not be careless in caring for the case. A child should be kept in bed when it has any temperature, and it should be isolated. A healthy child should not be allowed to come in contact with a child that has the chicken-pox for at least two weeks, or until the crusts have all fallen off and the skin is perfectly clear and smooth again. You will see that the bowels are kept regular, and give the child plenty of water to drink, and a liquid diet with feedings at regular intervals.

# Paragraph 564

It should wear a loose-fitting linen or muslin garment. The skin may be dusted with a dusting powder of cornstarch and rice powder (equal parts), or you may use stearate of zinc. When itching is very severe, use carbolized vaseline, or a paste made by mixing bicarbonate of soda with cold water. When this paste is applied to the irritated skin it is very cooling.

#### Paragraph 565

Do not allow the child to scratch the eruptions or molest them in any way, as serious infection

may result if this is permitted. The scratching can often be prevented by having the child wear an aluminum mitten, the same that is used to cure the thumb or finger sucking. While it is not necessary to disinfect the room after chicken-pox, it is well to see that it is thoroughly cleaned.

NOTE: In severe cases, and where the child does not seem to be getting along nicely with the nursing treatment, or if any complications arise, have the case seen by a physician in order that it may receive the proper medical attention.

#### SMALLPOX.

#### Paragraph 566

Smallpox is an acute infectious, as well as a contagious disease, and most frequently seen in unvaccinated children. It is rarely met with in children who have been properly vaccinated. It occurs in very young infants who have not been vaccinated. Smallpox is characterized by a skin eruption that consists of reddish-like specks which resemble flea bites.

### Paragraph 567

The rash feels like a small shot. It may appear on any part of the body, and the shot-like forms continue to increase in size. About the second day the eruption develops into papules, and during the fourth or fifth day of the disease the papules become vesicles, which are filled with a little clear watery fluid at the apex. They are cone shape and red in appearance, and look somewhat like chicken-pox, but in chicken-pox they are filled with a fluid almost from the beginning.

The vesicles develop into pustules, and begin to separate generally on the sixth day. They have a decided yellowish tint, creamy-like in appearance, due to the formation of pus cells. This condition exists until about the twelfth day, when the pustules rupture. After the pustules are emptied, either by rupture or absorption, they dry up, leaving a blackish crust, and the crust sep-

## LECTURES OF INTEREST TO WOMEN

arates from the body between the second and third week. The desquamation generally lasts from one to two weeks, and after the skin is free from any crusts, so to speak, we consider the patient as cured.

## Paragraph 568

The cause of smallpox is likely a specific micro-organism, of which we believe has not yet been defined. When smallpox occurs in children under ten years of age (that have not been vaccinated), it has been reported by some authorities that between 50 and 60 per cent. die.

## Paragraph 569

It is a clinical fact that resistance of the infection with children is less than that of adults. Nursing infants frequently become infected. In cases with young infants, the mouth, nose, and throat complications interfere very seriously with their feedings; often the cause of fatal results.

## Paragraph 570

The infection, in all probability, is contained in the vesicles, pustules, or crusts—the micro-organisms existing in these factors. It is transmitted through the air, and infection may take place some distance from a person suffering with smallpox. It is transmitted from one person to another, and also from bedding or clothing worn by an infected person. Even entering a room during the pustular or desquamative stage is sufficient to communicate the disease.

## Paragraph 571

It is a disease that is very contagious, and the infection has a remarkable tenacity of life and will remain active for some time in the clothing or in the scabs that form. The long life of the infection is similar to that of scarlet fever. The severity of the disease is in degree only; some cases are mild and others very severe. It is often very mild in cases that have been properly vaccinated. As a rule, one attack is a protection against the second, yet patients may have smallpox the second or third time—such cases have been reported. The

disease occurs more often in cold seasons. It may occur at any period of life, especially when not protected by vaccination.

## Paragraph 572

The first symptoms that are noticed in the patient who is coming down with smallpox are headache, pain in the back, high fever, drowsiness and vomiting, and in young children, usually convulsions. The pulse rate is increased in children as high as 150 to 160. Respirations are labored and frequent. The temperature rises rapidly, and often the first day it is 103, and continues to increase until it reaches 105 or more by the time the eruption appears. After the eruption is well developed, the temperature drops to normal. It is well to remember that in no other eruptive disease does this normal condition of the fever occur. Some cases are so mild that the above symptoms are hardly noticed, and in others they are very marked.

As mentioned, smallpox is always more severe in unvaccinated children, especially when they are very young, and in these cases the prognosis is always bad, while in vaccinated children the prognosis is always good.

#### Paragraph 573

The complications that are most common in children suffering with smallpox are inflammation of the mucus membranes of the nose, mouth, and throat, and broncho-pneumonia. You will remember that broncho-pneumonia is also one of the frequent complications of measles.

# Paragraph 574

NURSING TREATMENT: Patients must be placed in the very best sanitary surroundings with plenty of fresh air, and every case should be under strict quarantine. In the cities all the cases are invariably sent to the pest-house. The bowels should be kept thoroughly cleansed, and if the fever is high and delirium develops, give the patient a tepid pack. An ice-cap on the head, and cold colon flushings are recommended. These all have a tendency to make the patient more comfortable.

## Paragraph 575

The diet for a patient suffering with small-pox should be very light and nutritious during the fever stage, such as broths, custards, fruits, cold drinks, orangeade and lemonade, also ice cream. After the fever subsides, a more liberal diet can be given in the way of toast, baked potato, bacon, soft-boiled egg, boiled vegetables of any kind, broiled or baked fish, chicken, broiled chops, and all kinds of fruit. Patients that relish it can be given milk. Care should be taken that milk be given at the proper time, and not in combination with any of the acid fruits.

## Paragraph 576

Give plenty of water to drink at all times during the disease. Local applications on the rash is not considered to be of any great value. Three per cent. solution of carbolic acid and glycerine is recommended by some, or carbolized vaseline may be used. At the beginning of the rash, if the face is covered with a cold cloth wrung out of ice water, it is very soothing to the patient, and has a tendency to allay the irritation. It may be continued at intervals until the pustules form. After the pustules are formed, the open air treatment seems to have a beneficial action on the eruption, and does as well as applying any medication.

## Paragraph 577

To prevent the face from pitting, the pustules should not be irritated by scratching. One thing that may be done which is beneficial, would be to open the little pustules as soon as formed, and evacuate the pus. This would keep most of the pus from being absorbed, and also stop the destruction of so much tissue, thus preventing pitting.

NOTE: After every case of smallpox a most thorough disinfection and fumigation is required of everything that has come in contact with the case. This must be done to prevent the spread of the disease. A physician should be summoned at the beginning of the disease, in order that the case may receive proper medical attention, and complications be avoided.

It is essential that every child under school age should be vaccinated if we wish to protect the child against smallpox, or if it should take the disease it will be milder in its course, and the attack much shorter. Fischer says: "When we consider the ease with which we can confer immunity, and protect the human body against smallpox, then it seems nothing less than criminal to permit an innocent human being to go about unvaccinated."

Fathers and mothers who do not believe in vaccination, object to it because of their ignorance as to its value. We recommend that every child should be vaccinated by a physician, and when performed, as it is today, under strict antiseptic conditions, the results are most gratifying.

# PNEUMONIA

## Paragraph 578

Pneumonia is an acute infectious disease which occurs very frequently in infancy and childhood. It is caused by a specific micro-organism known to the medical profession as the pneumococcus. It is a disease of short duration, generally lasting from six to nine days. It is a self-limiting disease, and terminates in two different ways, by crisis or by lysis. By the term crisis we mean that the temperature returns to normal in a few hours and the patient is practically well. When it terminates by lysis, it requires several days to become normal and the child recovers gradually.

#### Paragraph 579

Pneumonia occurs more frequently in children between the ages of 5 and 10 years. It generally affects only one lung at a time; the right lung being more affected than the left, and the lower lobes are more frequently affected than the upper. Statistics show that in a given number of cases the lower lobe of the left lung becomes affected more often than any other part of either the right or left lung.

#### Paragraph 580

Children who are delicate or poorly nourished are more susceptible to the infection, and

oftentimes a sudden chilling of the body will bring on an attack. Coolidge thinks that the melted snow and high winds of March are responsible for many cases, as the germs found in the street filth are readily carried about by the wind.

## Paragraph 581

Pneumonia in children develops very suddenly, accompanied by a chill, vomiting or convulsions. Children who can talk will complain of headache, pains in the side, and often pains in the abdomen. Respirations are increased very early in the disease, and the nostrils become active. This, accompanied with the characteristic little grunt at each respiration when the nostrils move in and out as the child breathes, are all indications of pneumonia. There is very little, if any, coughing and if there is, it is of a dry hacking nature. There is very little expectorating in cases of children. Constipation is the rule, and in young babies there may be diarrhea.

#### Paragraph 582

The pulse is also increased, but the ratio that normally exists between the pulse rate and respirations is greatly disturbed. We might say that the normal ratio is one to four; that is, a child breathes once to four heats of the heart, but when the child breathes, say 60 times, and the heart beats only 140 times, then we have a condition that is present in pneumonia. The temperature will vary from 102 to 106, or even 107. The very high temperature we find in children who have rickets more than any other class. Ordinarily the temperature varies from 102 to 104.

The character and frequency of the pulse is of great importance in pneumonia. The pulse may be very high, 140 or more, and be quite regular and full, which is not a serious condition, but when it is weak and thready, and often not so frequent, such a case is in great danger of collapse, and requires frequent and careful stimulation, as advised by the attending physician. When the pulse rate has been 120, and suddenly increases to 140 or more, it

requires careful examination on the part of the physician in order to determine the cause of this sudden increase in the pulse rate.

## Paragraph 583

NURSING TREATMENT: The duty of the nurse or mother in caring for a case of pneumonia is to keep a correct record, for the physician, of the pulse rate, respirations, temperature and the character of the heart's action, or rather the character of the pulse, also the amount of urine secreted.

A case of pneumonia should be placed in a room by itself, and all healthy persons should be excluded. Fischer makes it emphatic that pneumonia in children should be isolated as strictly as a case of diphtheria. The important point in caring for a case of pneumonia is to keep the child well nourished. Assist in controlling the temperature, and lessen the frequency and increase the depth of respirations.

## Paragraph 584

As stated, pneumonia is a self-limiting disease, and it will generally run its course regardless of what we do. The amount of nourishment that a pneumonia case can assimilate to keep up its strength generally tells us whether a child will get well or succumb to the disease.

If it agrees with the child, milk should be given throughout the disease, also buttermilk. Farina and milk, oatmeal and milk, rice and milk, are all excellent foods, and with these foods the amount of milk given is increased. Cold foods, such as tapioca, corn starch and rice puddings, are of value. When the children are old enough, say from 2 to 3 years, a small amount of ice-cream, freshly made of cream, is very nutritious. Of the hot foods, chicken broth, veal broth, or mutton broth may be given. Albumin, in the form of the raw white of an egg, may be given. A soft boiled egg may also be given to older children.

#### Paragraph 585

The digestion is below normal in pneumonia cases, and it is a good practice not to feed the

infant too often. For bottle-fed and nursing babies, the time should be lengthened from a half hour longer between feedings than when it was in a normal condition; that is, if you were feeding the baby every three hours, when it has pneumonia feed it every 3½ or 4 hours, if this is possible. The same is true in feeding older children, and in order to overcome the heart depression, they should be fed regularly every four or five hours, and the night feeding is as important as the day.

As mentioned, good nourishment is imperative, and the child must be fed at night. It is not a good idea to let the child sleep through the night without taking nourishment; therefore, nursing and artificially fed infants, as well as older children, while they have fever, should receive nutrition every three or four hours, both day and night, because they demand large quantities of liquids, and as stated, a favorable termination of pneumonia can only be accomplished when the depressed vitality of the system is stimulated by the proper amount of nutrition.

#### Paragraph 586

In some cases, with children of poor digestion, or weak and delicate children, it may be necessary to predigest the food, or peptonize it, and at the same time it may be necessary to dilute the food, and in such cases it may be advisable to dilute the food one-half its usual strength, in order that it may be assimilated so that the child will receive a sufficient amount of nutrition. Children who cannot assimilate their food well may be given liquid peptonoids in addition to other foods. Orange juice may be given throughout the disease. It helps to keep the bowels regular and relieves the thirst.

#### Paragraph 587

The room which is occupied by a pneumonia patient should be supplied with plenty of fresh air. The temperature should be from 65 to 70 degrees F., and this given temperature should be maintained throughout the disease. Always remember how very important it is in nursing a case of pneumonia, to

have the room well ventilated, and see that the patient gets a sufficient amount of food. These are two essential factors—don't forget them.

## Paragraph 588

Now to reduce the temperature, the entire body should be sponged with equal parts of alcohol and water. It should be just luke warm, and such a sponge may be given every hour if the temperature requires it. Then when the temperature is not high the sponge bath may be given only in the evening and morning. When a child is sleeping comfortably do not waken it to give it a bath because the temperature registers 104 or 105. The child must be carefully watched, and it must be treated when the temperature is too high and the child is restless.

When the temperature is too high, some authors request that the child should be placed in a cold or ice pack to reduce the temperature. The cold applications to the chest in children, as a rule, are not well borne, and alcoholic sponges, with an occasional ice, or cold pack, will be found effectual.

# Paragraph 589

If the cough is troublesome, inhalations of steam may be tried, and if a child complains of a pain in the side, apply a mustard plaster. A pneumonia jacket should be put on at the beginning of the disease. This prevents the surface of the lungs from being chilled, and maintains a uniform temperature. The chest, front and back, should be thoroughly rubbed with hot camphorated oil two or three times a day.

The hands and feet must be kept warm with clothing in the way of mittens and socks, also hot water bags to the feet. Wash out the child's mouth several times daily with glyco-thymoline or borolyptol, or any good mouth wash. See that the bowels move daily, and this is best accomplished by giving enemas with a salt solution, and in case of very high fever we must remember that enemas, in which the chill is taken off the water, will assist greatly in reducing the temperature. In high temperature the ice cap should be applied to the head.

NOTE: The medical treatment for pneumonia is important, not so much as to the administration of drugs as it is to the careful attention that a case of pneumonia requires, in order to give the mother or nurse the proper instructions as the case progresses. The physician should be called when any of the first symptoms of pneumonia appear, and make daily visits thereafter, in order to prevent or treat complications at the proper time and give the little ones the best chance for their lives in this disease, which often proves fatal.

#### INFLUENZA.

## Paragraph 590

Influenza is a very acute infectious disease characterized by a catarrhal condition of the respiratory tract. It is a disease that affects the mucus membrane of the nose, throat and lungs, as well as the stomach and bowels, and causes a profound shock to the nervous system. The disease generally occurs in epidemic form, and spreads from one case to another. It seems to occur more frequently in cold and damp weather, and as a rule one attack immunes a person from another, yet the same person may have several attacks.

#### Paragraph 591

The disease is caused by a very small bacillus discovered by Pfeiffer in 1892. The symptoms of influenza in the adult are very marked, and the diagnosis is not very difficult. In children, especially in infants and young children, there is a marked difference in the symptoms, which often makes the diagnosis very difficult.

A child who has been infected with influenza may show the first symptoms any time within a few hours to a week after being infected. The disease may begin very abruptly, and the child become very ill at once, or it may come on gradually. The child will be indisposed and languid for several days before the acute symptoms begin. When children are old enough to give the physician intelligent knowledge, the diagnosis is not so difficult.

## Paragraph 592

The disease, as mentioned, affects the lungs, stomach, bowels, and nervous system. A child may have any one of the three definite types, or all types may occur in the same individual; or any two may be most prominent. That is, in one case it may be the lungs, stomach and bowels, or in another case it may be the brain and nervous system in combination with the lungs. The nervous type is the most serious, especially when complicated with the respiratory tract. An attack of the disease that affects the stomach and bowels, we find most frequently in infants and very young children.

The course of influenza in children varies. Some are sick only a few days or a week, and others require months to affect a complete recovery. The temperature generally lasts six or seven days, and often reaches 104 or 105, or even higher, during the height of the infection.

A child who is perfectly healthy and strong, with the heart in good condition, without any complications developing, has a much better chance for recovery than the bottle fed babies, or children with a tendency to rickets. In both cases the resistance is below the average. Such children are more susceptible to various complications which would naturally invite fatal termination. Secondary infection of the lungs means a grave prognosis.

#### Paragraph 593

A child infected with influenza generally has a high fever at the beginning, and feels very ill, often accompanied with convulsions and vomiting. If old enough, the child will complain of an aching body and a headache, and will also complain of being chilly. There is sneezing and running of the nose, and the eyes have a peculiar red and inflamed appearance. More or less bronchitis develops, also loss of appetite. The child seems prostrated and does not care to be moved.

When the stomach and bowels are involved there is a coated tongue, vomiting, and often diarrhea.

One of the complications of influenza in children is the severe catarrhal condition extending to the ear, and developing mastoid trouble. In some cases the kidneys become involved. The secondary infection of the lungs is a very common complication, both in children and adults, and in all probability causes more deaths than any other one complication in influenza.

## Paragraph 594

NURSING TREATMENT: The nursing treatment of influenza is as important, if not more so, than the medical treatment, and the patients who do not receive the proper care and nursing, run a great risk of losing their lives. It is a disease that cannot be trifled with, and the lack of proper care was the cause of more deaths during the recent epidemic in 1918, than any other one element. There are two things that are absolutely necessary for the welfare of the patient:

First: As soon as the patients begin to feel sick they should be put to bed and remain there for two or three days after the fever has subsided. Now, when we say 'remain in bed,' we do not mean that the patients should get out of bed to go to the toilet, or get up and sit in a chair, and it is best that they do not even rise up to take a drink of water. Water and all hot liquids should be taken through a medicine tube.

#### Paragraph 595

Second: A patient should receive no nour-ishment whatever during the fever stage.

Now, if the nurse and patient will strictly adhere to these two conditions, they will do more towards the recovery of the patient than anything else they can do. When we say "not to give any nourishment," we are just as emphatic about it as we are when we say, "Go to bed and stay there."

All the nourishment that the patient should have is orange juice, a little grape juice, and plenty of water to drink. No milk, or any other kind of liquids, should be given during the fever stage. As soon as the fever is all gone, then begin giving soups, broths, and some kind of liquid

nourishment every three or four hours. During this time the patient remains in bed, and after there has been no temperature for three days, the patient may begin to sit up for a short time; the first day in bed with a back rest, and the second day get out of bed into a chair and gradually regain their strength before they venture out of the house.

# Paragraph 596

When there is any lung trouble, mustard plasters should be applied to the chest once or twice daily, both front and back, and when there is any secondary infection of the lungs put on a pneumonia jacket and apply freely camphorated oil to the chest.

#### Paragraph 597

Make the patient comfortable by giving sponge baths once or twice a day during the fever stage, and the bowels should be flushed out once a day with a normal salt solution. Great care should be taken in moving the patients or taking them up quickly from the pillow.

## Paragraph 598

The above nursing treatment refers to adults and older children. Infants would be very hard to manage without giving them a little nourishment, but let it be very weak, and do not give any more than is absolutely necessary. They should be given what they have been accustomed to taking, only in very diluted form; not more than one-quarter normal strength. That is, if a baby nine months old has influenza, and it is bottle fed, it should be given a modified milk formula for a two or three months old child, and that sparingly.

Young children, as a rule, have grip very lightly. It is the older children and adults who suffer the most. Children are treated the same as adults, and should receive the same care and attention.

#### Paragraph 599

NOTE: The medical treatment of influenza is important in connection with the correct nursing. If any individual has an idea that he is strong

enough to overcome the average infection of grip, and throw it off without proper nursing and medical aid, he is badly mistaken. It is the over exertion and excessive food that causes a strain on the nervous system, and complications develop which result in death.

Every case of influenza demands the most careful medical attention in order to carry the patient safely through such a violent infection, and to prevent complications. If we can impress upon your mind the two important factors mentioned in the nursing treatment—to remain in bed, and take no food during the fever stage—we have accomplished a great deal.

This knowledge is obtained from personal experience, the writer having practiced medicine twenty years ago, during the great epidemic which swept the country at that time, as well as during the recent epidemic, without a death in the last one. This proves that the experience obtained in the first epidemic, when similar conditions existed, are of great value in the treatment of influenza.

#### TYPHOID FEVER.

#### Paragraph 600

Typhoid fever is one of the acute infectious diseases, and like diphtheria, we know the cause, which is a specific micro-organism called Eberth's typhoid bacillus. It is a disease that is rarely seen in infants, or in children under five years of age. Most of the cases that occur in children are from five or six years to the sixteenth year. More cases are noticed as the child grows older. Typhoid fever cannot be considered a child's disease, because it occurs in adults as frequently, if not more so, than it does in children.

#### Paragraph 601

The disease is contracted by drinking impure water or milk that is infected with typhoid bacillus. Some foods—like oysters, cheese or butter—may also carry the infection. The disease is not

contagious like measles, scarlet fever or diphtheria, as drinking water or food is the source of infection. It is a disease that affects the lining membrane of the intestines, and the infection may be present in the system for some time before any symptoms begin to appear.

## Paragraph 602

The period of incubation in typhoid fever is from one to two weeks, but rarely extends over three weeks.

When a child is suffering, or coming down with typhoid fever, it begins by complaining of being tired, and is quite languid, has headache, and maybe some vomiting, constipation or diarrhea exists, which is about equally divided in all cases. The abdomen is generally distended and fever is present. The temperature is one of the main points in telling whether the child has typhoid fever or not. It rises at night and falls in the morning, and keeps increasing a little both night and morning for the first week or so—a sort of a step-ladder type of fever—until the height is reached. The temperature remains high for about a week and then drops to normal again in the same manner in which it developed; that is, a little lower each day both morning and evening. The temperature is reasonably high in typhoid fever, ranging from one to five degrees. This is the typical course for an ordinary case of typhoid fever.

#### Paragraph 603

There is often delirium, severe headache, and stupor. In children suffering with typhoid fever, we rarely see hemorrhage of the bowels or perforations of the intestines as we do in adults. There is more or less cough accompanying typhoid, which is a sort of a typhoid bronchitis. When we have typhoid, and the only symptoms are fever and cough, the diagnosis is very difficult.

#### Paragraph 604

There is an examination of the blood in children suffering with typhoid known as the Widal reaction, and if it is the first attack that a child

has, it makes the Widal test more valuable, yet it should not be the only means of making the diagnosis. Remember the Widal serum test must be made by an expert laboratory man. Many examinations of the Widal serum test may be necessary in order to assist in making the diagnosis of a difficult case.

The examination of urine, giving what is known as the diazo reaction, may be of some value as to revealing the nature of the disease quite early in the attack.

## Paragraph 605

NURSING TREATMENT:—The treatment is very important in typhoid fever. The general care and comfort of the patient, the administration of food, and general management of the diet are very important factors in the treatment of typhoid fever.

The nurse or mother must learn most thoroughly how to feed a typhoid patient. On account of the high and long continued fever, we must remember that there is a very low vitality in the digestive and absorptive powers. The action of the intestines is greatly interfered with, and there must be just as much care exercised in treating a mild case of typhoid as a severe one. Do not forget to give a mild case the same careful attention that you would a severe one as regards the diet.

Typhoid fever patients rarely care for food, and should not be consulted in regard to what they shall or shall not take, but food and drink should be given at regular intervals both day and night, and should be given every four hours (some cases oftener), and the amount to be given should be governed according to the condition of the patient, which must be ascertained by the physician.

To quench the thirst, pure water is probably the best, but if there is no bowel trouble fruit juices may be added to the water. Lemonade, orangeade, raspberry juice, or grape juice can be used to good advantage, and is welcomed by the patient. Weak tea with the addition of a little red wine, given ice-cold, is an excellent thirst quencher. When there is severe diarrhea, weak tea and red wine are especially preferred. Albumin water, flavored

with lemon or orange juice, or a little sherry or brandy with ice added, is very useful, because it not only gives the patient a drink, but food as well.

Remember that large quantities of water, when it causes no unpleasantness, is of great value in typhoid, and it helps to eliminate the toxic conditions through the kidneys, and has a tendency to relieve the nervous symptoms that accompany typhoid fever.

Probably the food par excellence in typhoid fever is pure milk. Some patients will not care for it, and it will often disagree with some; while in others it will give us the ideal diet, as there is no food that meets so many requirements. The amount to be given depends upon the age of the child and the condition of the patient, and it should be prescribed by the attending physician.

We question if it is a good plan to give plain milk exclusively to children during the entire period of typhoid fever. Experience teaches that if plain milk is given exclusively, it is only a question of time when it will disagree with the patient.

The simplest method is to add from one to three ounces of lime water to each glass of milk. Plain or mineral water may be used instead, or a pinch of salt may render milk more palatable to children, and the addition of a teaspoonful, or less, of brandy may be relished by others.

## Paragraph 606

Milk may be given cold and flavored with fruit juice, vanilla or nutmeg, or it may be given in the form of ice cream. Equal parts of barley water and milk may be well borne when properly prepared and boiled together for a few minutes.

It must be remembered that all foods should be liquid. In addition to the milk, whey, buttermilk, strained soups and broths of all kinds may be given. These are best at the beginning, and later in the disease strained gruel, chocolate, and chocolate with malted milk may be added to the menu. These may be given alternating with milk. When there is any stomach trouble, and digestion is poor, then the milk must be predigested. When milk is not well taken, and does not agree with the patient, then the yolk of a raw egg added to the barley water may be substituted for milk.

## Paragraph 607

When there is any diarrhea or loose condition of the bowels, acid water is very beneficial, and makes an excellent drink, and is also a good thirst quencher. It is made by adding 8 to 10 drops of either dilute phosphoric acid or dilute hydrochloric acid to a tumbler of sweetened water.

It is not only important to carefully feed a typhoid patient during the fever stage, but the feeding of the convalescent patient is equally as important. Do not give solid food for several weeks after convalescence is thoroughly established, on account of the great danger of hemorrhage. Soups may be thickened with sago, farnia or barley, and the yolk of a raw egg may be added to the soup as well. Liquid peptonoids and panopeptone are also of value. Do not take the responsibility of giving solid food to a patient convalescing from typhoid fever until you are directed to do so by the attending physician.

## Paragraph 608

To control the fever, it is best accomplished by cold packs or sponging; also the cold bath is of great value to reduce fever, and is recommended by some physicians.

The hygienic measures in typhoid must not be forgotten. Owing to the infectious nature of the discharges, the stools and urine must be thoroughly disinfected; also the sputum, providing there is any cough or expectoration present. In fact, all discharges should be received in vessels containing five per cent solution of carbolic acid, or a strong solution of chloride of lime. A strong solution of copperas should be thrown in the toilet from time to time while a typhoid patient is in the house.

## Paragraph 609

All clothing, such as bed linen, handker-chiefs, nightgowns, as well as the dishes used by the patient, should be soaked in a 1-2000 bichloride solution for at least a half an hour before being washed.

Sunlight is the great disinfectant in typhoid fever, and the room should be selected that gives the greatest amount of sunshine and fresh air as it is possible to obtain.

## Paragraph 610

NOTE: Typhoid fever requires daily medical attention. While in young children the disease is more favorable than in adults, complications are to be watched for, and should immediately receive medical attention. Some of the unfavorable conditions in typhoid are the distended abdomen, frequent bleeding from the bowels, weakened and depressed nervous system, and the poor assimilation of food.

If complications develop late in the disease it is unfortunate, because the child is in a weak-ened condition and will be unable to cope with any serious complications.

Typhoid fever in children generally terminates earlier than in adults. It may run its three or four weeks course, but this is not the rule. The older the child, the more the disease will take on the adult time. The course of typhoid fever in infants is generally entirely different from older children.

Prophylactic treatment of typhoid fever is accomplished by the injection of typhoid vaccine, and should be given as deemed advisable by the attending physician.

The following table is the period of incubation of the acute infectious diseases just mentioned, and this will help the mother to know just when the child will become sick after being exposed to any of these diseases.

### LECTURES OF INTEREST TO WOMEN

## Paragraph 611

## PERIOD OF INCUBATION.

Chicken-pox	Average 7 to 14 days
	Possible 5 to 21 days
Diphtheria	Average 5 to 7 days
	Possible 2 to 12 days
Influenza	.Average 2 to 3 days
	Possible 7 days
Measles	Average 11 to 14 days
	Possible 9 to 21 days
Mumps	Average 7 to 14 days
Scarlet Fever	Average 2 to 6 days
	Possible few hours to 15 days
Typhoid fever	Average 7 to 14 days
Whooping-cough	Average 5 to 7 days
	Possible 4 to 21 days

#### Paragraph 612

The other infectious diseases have no positive periods of incubation; therefore, after a child has been exposed to any of them, one cannot tell just when to expect the first symptoms.

The following diseases and conditions are not infectious; therefore, there is no definite period of incubation.

#### Paragraph 613

#### BRONCHITIS.

Bronchitis is an inflammation of the bronchial tubes, and it may be primary or secondary. It often complicates some of the acute contagious diseases, such as measles or whooping cough, and children who have deficient nutrition, or cases that are weakened from having rickets, or catarrhal conditions, enlarged tonsils or adenoids, are all liable to develop an attack of bronchitis any time.

Bronchitis may be very mild or it may be very severe. When mild, it generally affects only the large bronchial tubes. It generally begins as an ordinary cold with a cough. The temperature in mild cases, where the inflammation has extended to the smaller bronchi, the temperature will be from 102

degrees F. to 103 degrees F. These figures refer to the evening temperature.

There is more or less secretion formed in the mucus membrane, but children under five years of age rarely, if ever, expectorate. The mucus accumulating in the stomach and bowels often cause vomiting, and sometimes diarrhea. There is a loss of appetite, and you will notice a peculiar rattling or wheezing sound occur in the lungs as the child breaths. This can be noticed by placing the ear to the chest, or when the baby rests against the mother.

## Paragraph 614

Mild cases of bronchitis last from two or three days to a week. In severe cases the children become quite sick and often have a very high temperature. The breathing is rapid and very labored, and the cough is almost constant. The hands and feet become cold, and the skin (of the hands and feet) will appear bluish. The same condition will exist in the face in very severe cases. This condition often grows rapidly worse and the child may suffocate by excessive secretion forming in the lungs, that cannot be eliminated, as it cannot expectorate. Yet in most cases of bronchitis infants get well. It affects older children the same as infants, only not so severe, and in older children it is not considered nearly so serious.

## Paragraph 615

The pulse rate in bronchitis is of great value as to the severity of the case. The pulse rate from 120 to 130 in young children should be looked upon favorably. If the pulse suddenly increases to 140 or 160, and respirations are increased from 60 to 80 per minute, the case becomes more serious and in all probability the child will have pneumonia.

#### Paragraph 616

NURSING TREATMENT: The nursing treatment of bronchitis is hygienic and dietetic. It is absolutely essential that a child with bronchitis be put to bed in a room, well ventilated, with a temperature of about 70 degrees F., and remain in bed

while it has a fever. The child should have plenty of fresh air, and should be kept free from dust, and the ventilation of the room should be such as not to allow the child to be in any draughts. Give the patient as much sunshine as possible. The body should be kept warm but not too warm. It is best that flannels be worn next to the skin.

When the child is old enough to stand up or creep, or even walk, it should not be allowed to sit on the floor. Put it on the bed with its playthings and entertain the child, and in that way keep it from taking more cold. See that the feet and legs are kept warm by using the hot water bottle, or wrap the limbs in warm flannels.

## Paragraph 617

When the temperature is high a mustard foot bath is of value, and a luke warm sponge bath, followed by rubbing with a coarse towel, will stimulate the circulation, and is very soothing to the child. Remember hot baths must not be given, and the room should never be overheated. Coolidge says that the correct temperature for the room during the day is 68 degrees F. and at night 55 degrees F.

#### Paragraph 618

Mustard plasters applied to the chest are of great value in bronchitis. The plaster should cover the entire chest, both front and back, and should be warmed before applying. It should be left on just long enough to cause the skin to become reddened. A mustard plaster must be carefully watched, and examined from time to time, to see that it does not cause too much irritation of the skin. The time required will vary from five to thirty minutes, because children differ as to the amount of irritation that the skin will stand. It should remain until the skin is quite red.

#### Paragraph 619

The mustard plaster is better applied at night than in the morning. After it is removed the chest is dried quickly and rubbed with camphorated oil. A fresh plaster must be made each time. In

severe cases it may be necessary to repeat the plaster every three or four hours, but generally once or twice a day is sufficient.

#### Paragraph 620

One of the important things in the nursing treatment is to see that the child takes plenty of nourishing food. This is very important, as the child's strength must be supported with the proper amount of nourishment. When a child refuses food by the mouth, then rectal feeding should be employed.

Foods should be selected that are easily digested, and those that will give the greatest amount of nourishment. Predigested milk should be given to feeble infants, and whey, soups and broths should not be forgotten. The yolk of an egg beaten up in sherry wine for older children will give the proper nourishment and stimulation. See that the child drinks plenty of water.

#### Paragraph 621

It is important to remember that a sick child cannot assimilate the same amount of food that it can when well; therefore, it is well to give a small amount at first, and gradually increase it as the child's condition improves. This is also true of young infants. When breast fed they may be given a little plain water or barley water before each nursing, and let the nursing period be a little shorter than usual. Also remember that older children should have a liquid diet during the fever stage.

NOTE: The medical treatment of bronchitis is very important, not from the fact that the child needs so much medicine, but it needs careful watching to note how the child is progressing, so do not neglect calling a physician early in the disease in case it does not immediately respond to home treatment. Here the old adage, "A stitch in time saves nine," is very appropriate.

The child needs certain medication, and treatment with steam inhalations, with properly selected drugs that will be indicated in a given case, will be found a very valuable means of removing the secretions that accumulate in the bronchial

#### LECTURES OF INTEREST TO WOMEN

tubes, and such treatment has a decided effect in controlling the disease. At the same time such inhalations act as a stimulant to the respiratory tract.

#### Paragraph 622

#### TONSILLITIS.

Tonsillitis is an acute inflammation of the tonsils, and it is probably one of the most frequent diseases of childhood. It is seen oftener in childhood than in infancy, and the onset is quite sudden with a high fever, frequently accompanied with vomiting. The child complains of sore throat, pain when swallowing, and has a general aching in the joints and muscles of the neck, also accompanied with headache and pain in the back.

## Paragraph 623

There is a close relation between tonsillitis and rheumatism. Rheumatic children are predisposed to tonsillitis. Children who have large tonsils only require a slight cold to bring on an attack. During an attack of tonsillitis the tonsils become enlarged and are covered with white spots which are separated from each other and appear as as white or yellowish dots over the tonsils.

## Paragraph 624

In tonsillitis the temperature is usually high, and the thermometer will register from 102 to 103 or 104. As a rule the bowels are constipated, the tongue is coated, and the breath has a peculiar foul odor. On looking into the throat you will see the conditions just mentioned. As a rule, both tonsils are affected at the same time. Occasionally it begins on one side and then extends to the other.

Sometimes the little distinct dots are so close together that they will unite and form one large patch, which you might think was diphtheria, but remember that a diphtheric patch is gray in color and covers the whole of the tonsils, and often extends to other parts of the throat. Also remember that in diphtheria the fever, as a general rule, is not high like it is in tonsillitis. The acute symptoms of tonsillitis do not last long and

the white spots on the tonsils disappear after a few days, and leave a swollen red tonsil, which will return to its normal size in a few days after the spots are all gone, providing the case terminates favorably.

## Paragraph 625

NURSING TREATMENT: The important features in the nursing of tonsillitis is the general care and administration of food, as there is usually so much pain in swallowing that no solid food can be taken, and cold foods are more acceptable to the patient. It is best to give them in small quantities and in liquid form as much as possible. Food that is nutritious and soothing to the inflamed throat is a little ice-cream, ice-cold jellies and ice-cold drinks, like orange juice and grape juice. Any cold foods that a child can swallow with comfort is more agreeable than anything hot, and it must be remembered that during the fever the diet must be liquid, and then a little later blanc mange or fruit jellies may be given, which should be cold, and it will be soothing to the throat and easily swallowed by the child. A child suffering from tonsillitis should be kept in bed and as quiet as possible. Sponging with alcohol, and enemas twice a day will be of great value in controlling the fever.

# Paragraph 626

NOTE: The most serious cases of tonsillitis should be left entirely to the physician, who should be consulted at once. Until he arrives, give the child an enema and a good cathartic of anything you may have on hand. Sprays and gargles are used in treatment of these cases, and the mother should teach her child how to gargle, using plain water, and then when it is necessary to use any medication it can be easily done and will be effectual.

A mother should examine a child's throat often, using a teaspoon to depress the tongue, so that a physician can make a good examination, and the child is familiar with the manner in which it is done, and will not offer any resistance. It is a good plan, when the mother is examining the throat, to have a little electric battery to throw a light in the throat. This will teach the child not to be

afraid of such an examination as the physician will employ when a child is real sick, and the throat needs to be examined.

# Paragraph 627 CROUP.

Croup is an acute catarrhal condition of the mucus membrane of the throat, charactertized by severe spasms of the larynx. As a general rule croup does not occur until after the infant is six months old, and then until it is four or five years old it is very common.

There is one thing to remember in a case of croup that is very important, and that is when it comes on suddenly at night, after the child has been perfectly well during the day, there is practically no cause for worry, as the case will terminate favorably; but when it comes on very slowly, and is not benefited by the ordinary nursing treatment, it may become serious and prove fatal.

## Paragraph 628

Any condition that causes an excessive secretion to accumulate in the back part of the throat, when the child lies on its back, has a tendency to cause croup. Sometimes there are hereditary conditions where the child will have a tendency to attacks of croup. Such conditions as enlarged tonsils, adenoids, exposure to cold, indigestion and constipation are often immediate causes of croup. It must be remembered that if a child has had croup once, it is more liable to have another attack at some future time.

#### Paragraph 629

An attack of croup usually develops very suddenly at night, and often without any warning. Sometimes we can suspect a child will have croup if, during the afternoon or evening, it becomes hoarse and the hoarseness is accompanied by a peculiar barking cough. A child generally wakens from a sound sleep with all the signs of croup. An attack comes on with a hoarse barking cough, the face will become congested, and the little patient will be in great distress. It sits up in its crib strug-

gling and gasping for breath, and the attack terminates with a long noisy high-pitched sound as the air is drawn into the lungs.

## Paragraph 630

A nurse or mother who attends a severe case of croup for the first time, in our opinion, is not likely to ever forget it. While it is a most distressing thing for a nurse or mother to witness, yet the child with the simple and acute form will recover quickly, and it rarely, if ever, proves fatal. Therefore the nurse or mother should control her feelings, and show no anxiety or excitement, because the same nervousness shown by the mother will be imparted to the child, and it will only have a tendency to make it worse.

## Paragraph 631

Children suffering with croup will have an increased pulse rate, and the temperature may vary from 100 to 103 degrees. The forehead, or even the whole body, may be covered with perspiration caused by the spasmodic condition of the throat, and as a result of the struggle for breath.

#### Paragraph 632 .

NURSING TREATMENT: Remember this; that in every case of croup the child needs attention at once. The well trained mother or nurse can do much to relieve the little patient of its suffering.

#### Paragraph 633

The first thing to do is to try to get the child to vomit, and the best and most simple remedy for this is syrup of epicac, which may be given in one-half to one teaspoonful doses, and repeated in 15 minutes or a half hour until effectual, or until several doses are given. As soon as the child vomits, it will free the throat of the accumulated mucus, and the labored breathing will be relieved.

If there is no syrup of epicac in the house, and it is impossible to obtain it, have the child take some warm water in which is placed a pinch of salt or mustard; or another good home remedy to cause

a child to vomit is equal parts of powdered alum and honey. Give the child several teaspoonfuls of the mixture, or a teaspoonful every 5 or 10 minutes until it vomits.

## Paragraph 634

Apply very hot applications to the throat. Take a piece of flannel and wring it out of very hot water—have it just hot enough so that it will not burn the skin, and change the hot cloths often. At the same time have the child inhale steam. A little turpentine added to the water will be of value. If you happen to be so fortunate as to have an ordinary croup kettle at hand (one that is especially designed for such cases), so much the better. The steaming should be continued until the breathing is easier.

## Paragraph 635

A sheet is placed over the child's head or crib, and steam forced in, under the tent that is made with the sheet, for 20 minutes at a time.

Remove the sheet for a few minutes, then repeat the steaming again for 20 minutes. The steam loosens the secretions in the throat. Give the child a soapsuds enema, and get the bowels to move freely; and if it can be taken, give the child a dose of castor oil.

#### Paragraph 636

NOTE: A mother or nurse should not give medicine of any kind (only as mentioned above) in a case of croup, unless ordered to do so by the physician, and he should be summoned at once at the beginning of the attack.

Remember that when croup appears suddenly the child will generally recover, as it results from catarrhal trouble and accumulated mucus. The dangerous forms of croup are the cases that come on very slowly—don't forget this. Children who have croup at repeated intervals should not be allowed to stand in draughts by open windows, and extra care should be taken that they do not take cold.

## Paragraph 637

Croupy children should wear flannels the year round, but of different weights. It is a good idea to sponge the neck and throat every morning, and give the parts so sponged a brisk rubbing with a salt towel.

The attending physician should look after the case, and correct any nose or throat trouble that may be present. Keep the child out of doors as much as possible on pleasant days, but it should remain in the house if the weather is damp, accompanied with sharp cold winds.

# Paragraph 638 CONVULSIONS.

In infancy and early childhood convulsions occur with more or less frequency, and they occur more often in children than they do in adults—rarely after the seventh year. The reason for this is because children have an extremely delicate organization of the nervous system. The child feels the high nervous tension which surrounds it much more quickly than an adult, and it suffers in proportion.

# Paragraph 639

Any irritation that affects the nervous system to a marked degree would have a tendency to cause convulsions. The most frequent irritation of the nervous system is caused by stomach or bowel trouble, and when a child under your care has convulsions, the first thing to think of as the cause is some abnormal condition of the stomach and bowels.

Any diseased condition that will cause a high temperature may also cause convulsions; intestinal worms, tight foreskin on boys will also cause them. Any condition that has a direct irritation of the brain, blows or injuries to the head, are all well known causes of convulsions. Remember, as a rule a convulsion comes on very suddenly without any warning. When you see an infant with a high temperature, very restless, twitching of the extremities and eyelids, rolling the head from one side to the other with the eyes fixed, all are suggestive signs of convulsions.

#### Paragraph 640

Convulsions may last for only a few seconds, or for some minutes, and there may be only one attack or there may be several. One attack of convulsions generally makes a child more susceptible to another. There is a general contortion of the face and rigidity of other parts of the body, such as the arms and legs. There is often a frothing at the mouth, irregular pulse and breathing, and the child becomes unconscious.

Convulsions that are caused by stomach and bowel troubles, worms, rickets, teething, or some other reflex condition, rarely terminate in death, but when they are due to direct irritation of the brain they are more apt to be fatal, or leave some lasting paralysis.

## Paragraph 641

NURSING TREATMENT: When a child who has convulsions comes under your observation, and you are called upon to treat the attack, you will undress the child, quickly place it in a hot bath, and with the little finger vaselined (if the child is of sufficient age), insert it in the rectum. This stretching of the rectum generally causes the child to regain consciousness.

Place the child in a bed in a quiet room, and apply a cold cloth or ice-bag to the head; wrap up the body, arms and legs in a large Turkish towel wrung out of mustard water (l tablespoonful of mustard to a gallon of water). It should be hot, the same temperature as the bath. Leave the mustard towels on the body and extremities until the skin becomes quite red. The cold applications should be kept on the head for at least half an hour after the convulsion is over.

# Paragraph 642

Give a high warm saline enema as soon as possible. If the bowels have not recently moved you had better give an enema first; then, after the bowels move good, flush out the colon with a normal salt solution. You will note that many times as soon as you clean out the bowels the convulsions will cease.

## Paragraph 643

As soon as the child is able to swallow, it should be given a dose of one of the favorite cathartics—castor-oil should have the first consideration. Give a does of oil according to the child's age, and repeat the saline enema in about an hour or two after giving the oil.

You will restrict the diet to broths, whey, or chocolate mixture of malted milk, and let this constitute the diet for the first 24 or 36 hours; after that, allow a diet only gradually of solid foods, and then only those of an easily digested nature. A child who has convulsions must be kept very quiet and have an open air life; should have plenty of rest and sleep, and not be irritated or excited in any way.

# Paragraph 644

NOTE: The family physician should be consulted to discover the cause of convulsions, and employ him to prescribe and treat the case in order to prevent further attacks, but it must be remembered that it is almost impossible for the physician to be present during a convulsion, as in most every case it will be over before the doctor arrives, therefore, we have given detail as to treatment during the attack.

# Paragraph 645 ADENOIDS.

Adenoids are growths that develop in the back and upper part of the throat. It is that part of the nasal cavity known as the naso-pharyngeal cavity. Adenoids is an increased growth of the adenoid tissue which is normally present. The adenoid vegetations may vary in number and size. In severe cases they are very numerous and irregular in shape, and often fill the entire cavity extending over the tubes that lead to the ear.

#### Paragraph 646

They occur in early infancy and early child-hood. Generally the child does not develop adenoids until after the fourth or fifth year. They rarely develop later in life. New born infants have

adenoids; such cases are frequently seen. Fischer states that heredity, to some degree, plays an important part in the cause of adenoids.

## Paragraph 647

Children who have adenoids must breathe through the mouth. This causes a pinched expression of the nose and a long drawn face, and the bones of the upper jaw are deformed to such a degree as to cause the upper teeth to become very prominent, and the lips become swollen and thick. Ear trouble, such as deafness, is often caused by adenoids, and the voice has a muffled nasal sound. Such letters as m, n, and ng cannot be pronounced.

# Paragraph 648

Children who have adenoids often complain of earache, and it is of interest to note that when adenoids are present it is invariably associated with bed wetting; that is, children who wet the bed continually generally have adenoids. There is mouth breathing and more or less snoring at night.

#### Paragraph 649

Children who have adenoids usually have a very poor appetite, and their mental condition is impaired. They are also subject to bronchitis, croup and asthmatic conditions; take colds easly, and have more or less coryza. They are also avenues of infection, and children with adenoids are more susceptible of taking any of the acute infectious diseases.

#### Paragraph 650

NURSING TREATMENT: There is no special nursing treatment in a case of adenoids, but you see how important it is for the child's health that it should have the proper medical attention. The family physician or specialist should be consulted whenever a mother suspects that her child has adenoids, and if present have them removed by a surgical operation. The attending physician will give directions in regard to the care and nursing as the case may demand after an operation.

# Paragraph 651 RICKETS.

Rickets is a disorder of the entire body caused by feeding the child improper food. Therefore, it is a disorder of nutrition. The bones are affected first, but it also affects other parts of the body; especially is this true of the nervous system. It usually occurs in a child's life from six months to the end of the second year.

# Paragraph 652

Bad surroundings, lack of fresh air, and not sufficient sunshine are conditions that greatly help the disease to develop. As mentioned, error in diet is the real cause. We find rickets in babies whose mothers have nursed them too long and given them a poor quality of milk. Also bottle fed babies, on patent foods, or poor quality of cow's milk wrongly prepared are frequent causes.

In discussing this subject, let us take for example an infant who is developing rickets. Note how it affects the child so that you may be familiar with such conditions and secure medical aid in proper time. The infant is apparently well and in perfect normal condition; is plump, well nourished and has a good color. Now from this seemingly normal child, the changes due to rickets begin to take place-namely: its color fades and it becomes pale; it may not get thin but the muscles begin to lose their tone, and when the time arrives for the baby to hold up its head it will make no attempt to do so. It does not try to sit, stand, or walk alone. It may walk for a short time and then not be able to continue doing so. It will be months behind the average child if it does stand and walk alone. These children oftentimes cannot walk when two years of age.

# Paragraph 653

There is generally a strong tendency to constipation and skin irritation, and the baby's head perspires very freely when asleep. It is very restless and does not sleep well. As soon as the above abnormal conditions begin to develop, a physician should be consulted in order to ascertain the real cause.

#### Paragraph 654

In a well developed case of rickets the disease first affects the bones, and little lumps form on the ribs, wrists, knees and ankles, and the end of the bones will become enlarged. The head becomes very large in proportion to the rest of the body. The teeth are very late in coming, and they decay very early. The muscles and bones become very weak and bend very easily. Curvature of the spine occurs and the legs become bent, and bow-legs develop. The arms will bend very much like the legs, and bones of the pelvis will take abnormal shapes. These cases in girls will have a deformed pelvis, which will give serious complications during pregnancy in later life. Possibly the most striking symptom is the condition which develops from weakened abdominal muscles. The abdomen becomes distended and bulges to a marked degree.

#### Paragraph 655

Children who suffer with rickets offer very poor resistance to overcome colds, catarrh, bronchitis, pneumonia, any of the acute infectious diseases, or stomach and bowel troubles. This is true because the mucus membranes are affected as well as the bones and muscles. After a child is two or three years old it has a tendency to recover from rickets slowly, probably due to the fact that it eats a greater variety of food. Deformities that develop during rickets very often remain throughout the child's life.

#### Paragraph 656

NURSING TREATMENT: The nursing treatment of rickets is very important because it is a condition of nutrition, and the feeding and care of the child is in the hands of the mother or nurse. Therefore you see how important it is for you to know how to give children the proper kind of food to prevent rickets, as well as to treat the disease.

You as a mother and nurse should thoroughly understand the principles of infant feeding, and if the mother will do this her baby will not develop rickets on account of any ignorance on her part relative to infant feeding. If a child develops

rickets the case should be immediately placed under the supervision of the physician.

If poor surroundings exist they must be changed before any medical treatment will be effective. Every case of rickets demands plenty of sunshine and open windows night and day. Each child should receive a bath with a handful of sea salt added to the water.

After the surroundings have been corrected, the next important step in the nursing treatment is the administration of the proper foods. When a breast fed child, who is nursing, begins to show signs of rickets, a chemical examination of the milk should be made, and if any abnormal conditions exist it must be corrected at once. It may be necessary to discontinue nursing altogether, and give the infant modified or plain cow's milk; or it may be advisable to give a mixed feeding in such cases.

When the milk is examined, and it is low in proteids, it is necessary for the mother to increase her diet of meat, eggs and cereals if she desires to continue nursing her child. Oftentimes she may do so with the mixed feeding, under her physician's directions, but when the child has reached the age of nine months, it is a better plan not to try to build up the breast milk, in order to continue nursing the child, but wean it at once, giving it artificial feedings of patent foods or modified cow's milk.

# Paragraph 657

Rickety children should have plenty of cereals, such as barley, cream of wheat, sago, farnia or rice, with plenty of fresh vegetables, such as spinach, peas and beans. Eggs, white meats, chicken and fish may be added to the diet list for older children. Fresh fruits are also valuable, and butter and cream must not be forgotten. Young children may take meat juices, orange juice, coddled eggs, clear mutton or chicken broths, and cereals cooked several hours, given in the form of gruel. Bacon is also of value.

When children who are fed on condensed milk, or any of the patent foods, develop rickets, you must change the food at once, giving modified cow's milk or plain milk, and in these cases, if possible, secure herd milk direct from the dairy, and do not pasteurize it but give it properly modified or plain.

In nursing a case of rickets, let it be remembered that regularity is of great importance as regards time for feeding, sleep and daily exercise. A child should be kept in the fresh air as much as possible. In winter time a child should be dressed the same as going out of doors, and allowed to exercise in the room with the windows down from the top, so they will have plenty of fresh air, and at the same time be protected from direct draughts.

# Paragraph 658

Baths are better given in the evening just before going to bed, and not too warm. A child may be placed in the tub with a temperatue of 98, and reduced to 90 by adding cold water. A teacup full of dissolved sea salt should be added to each gallon of water. After the bath the child should have a good massage. A little cocoa butter may be used on the hands for this rubbing. It is a mother's duty to see that the bowels keep regular, as directed under the treatment of constipation.

NOTE: The prescribing of medicine should be left to the physician in charge, and if deformities develop they must be treated by the proper braces or surgical operations. We must impress this fact upon mothers, that it is necessary that the deformities be corrected early in life, as it will prevent much suffering in later years.

#### Paragraph 659

#### SCURVY.

Scurvy, in children, is a condition that is caused by improper feeding. It is constitutional and occurs in both breast fed and bottle-fed babies, but it is generally more common in bottle fed. Especially do we find such cases where they

are fed exclusively on prepared baby foods. The greatest number of cases occur in infants who are fed on condensed milk.

# Paragraph 660

It is rarely seen during the first six months of a child's life, or after the second year. The disease occurs in any climate and any locality, either in the best or in the poorest hygienic surroundings. We find scurvy among children who have been deprived of breast milk, and in those cases which have been fed exclusively on a milk diet and the milk has been over-sterilized. We find it in cases where children have been fed condensed milk or patent foods in which fresh milk has not been added. So we may say that the cause of scurvy is the absence of fresh milk in a child's diet, regardless of whether it is cow's milk or human milk.

When scurvy is developing in a child, the first abnormal condition that you will notice is a marked irritability and restlessness that occurs both day and night, and the child is unable to sleep. The child is not satisfied with ordinary care and attention, and cries when the arms and legs are moved. There is more or less swelling of the legs and forearms. When the child is not disturbed it lies very quietly, which gives the impression that he is paralyzed, but it lies quiet in order to prevent pain which is caused by moving the swollen limbs.

# Paragraph 661

A child generally loses weight, becomes very anemic, has loss of appetite, and when food is taken the child generally perspires very freely, especially about the head.

#### Paragraph 662

A child with scurvy often has an afternoon or evening temperature of 100 to 101. The pulse is generally feeble, small in volume, and ranges between 120 to 150. The breathing is not affected. A child suffering with scurvy will often stop walking suddenly. The gums will become spongy and swollen, and these conditions will develop before there is a general break-down.

# Paragraph 663

Scurvy is generally a chronic disease. The recovery will depend upon how quickly the vitality can be restored. It is necessary to continue the treatment for some time after the symptoms have disappeared, or a relapse will occur.

NURSING TREATMENT: The nursing treatment for a case of scurvy begins with a change in the manner of living, as regards food and the hygienic conditions, and as it is a disease of nutrition, the diet treatment is of great importance. It must consist of fresh milk, fine potato gruel, raw meat, raw yolk of egg, orange juice and sugar.

# Paragraph 664

It will not suffice to simply change the diet to fresh milk alone, but it is necessary to add to the milk some more active agent like potatoes, carrots, vegetable juices, or orange juice. Broths that contain vegetables are very beneficial. The vegetables mostly used in such cases are carrots and potatoes that have been boiled with the meat and strained. Raw meat juices—the blood squeezed out of a piece of raw round steak—seasoned with pepper and salt and given hot, should be added to the list.

Together with this change of diet, it is necessary that the child be given plenty of fresh air and sufficient sunshine. In fact, a sun bath is of value. Care must be taken not to injure the delicate nature of the skin by being exposed too long to the sun rays. Proper ventilation of the sleeping apartment is of the utmost importance.

#### Paragraph 665

A child suffering from scurvy should be given a daily salt bath. The bath is prepared by adding one pound of sea salt to a tub of water. The bath should be given at a temperature of 95 degrees F. The child should remain in the bath about five minutes, and the entire body should be massaged quickly and thoroughly while in the bath, and after the body is dried it should be rubbed with a coarse towel, or salt towel, until the skin has a pinkish color. The bath, with the friction applied to the

skin as mentioned, is very stimulating, and if given in the evening it has a tendency to promote sleep and give the child a good rest.

NOTE: The medical treatment of scurvy is important, as the child needs restoritives and tonics in order to build up its general condition, and every case of scurvy should be under the care of the attending physician in order that he may prescribe the proper medication needed in each individual case.

It is noted that in rickets we have the projecting abdomen which does not occur in scurvy. Neither does the peculiar shape of the head occur in scurvy that is noticed in rickets. The general condition of scurvy resembles tuberculosis to a certain extent, but the absence of the cough, respirations not being impaired, and no physical signs noticed in the lungs, all tell us the difference between scurvy and rickets. Sometimes scurvy and rickets may be found at the same time in the same child; both being caused by giving improver food.

#### Paragraph 666

CHILD'S DIET FROM ONE TO TEN YEARS OLD.

It will be very convenient and interesting to have a diet list for the child from one to ten years old, and we will give you the one we think best. By using this list in combination with instructions given in weaning, it will be sufficient to give you the necessary help.

When we begin to give other foods, changing from human milk to cow's milk, and from cow's milk to the following diet list, we know that these changes sometimes cause stomach and bowel trouble (gastro-intestinal derangements). For this reason, the general supervision of the stools, and comfort of the infant is required. If the cow's milk causes constipation, which it generally does, such cases should receive large quantities of water, orange juice or prune juice, which will help to regulate the bowels. Cornmeal and oatmeal mush,

and corn muffins with butter are also very good. An ounce of expressed beef juice once a day is very good, and it has a tendency to exert a mild laxative action.

The following menu is copied from Fischer, and selections can be made from it for each feeding that would be most pleasing for the individual case, as a child's likes and dislikes are similar to those of adults.

#### Paragraph 667

DIET FOR CHILD FROM ONE YEAR TO FIFTEEN MONTHS.

6:00 A. M.

Milk, eight ounces (if constipated give Horlick's Malted Milk, three teaspoonfuls in eight ounces of water).

Zwieback or biscuit.

9:00 A. M.

Saucer of farina, hominy, or cream of wheat. Cup of milk.

12:30 P. M.

Beef or chicken broth with toast crumbs.

Expressed beef juice over baked or mashed potato.

4:30 P. M.

Apple sauce or juice of orange.

6:00 P. M.

Cup of junket, Cup of milk. Biscuit.

# Paragraph 668

DIET FOR CHILD FROM FIFTEEN TO EIGHTEEN MONTHS.

6:00 A. M.

Milk and crackers.

9:00 A. M.

If constipated, prune jelly, apple sauce, or orange juice.

Add one teaspoonful of dextrimaltose to each cup of milk.

9:30 A. M.

Saucer of hominy, farnia, Scotch oats, or cream of wheat.

Cup of milk.

12:00 NOON.

Eight ounces of beef, lamb, or chicken broth, thickened with farina, sago, or home-made noodles.

Coddled egg, alternate days, steamed rice with expressed beef juice.

Apple sauce.

3:30 P. M.

Cup of milk or malted milk.

Zwieback or biscuit.

6:00 P. M.

Cup of custard, junket, or steamed rice.

Cup of milk.

Biscuit.

Paragraph 669

DIET FOR CHILD FROM EIGHTEEN MONTHS TO THREE YEARS.

6:30 A. M.

Orange juice, apple sauce, or prune jelly.

7:30 A. M.

Warm milk, eight ounces.

Mellin's Food, one teaspoonful, or Eskay's Food, one teaspoonful.

Zwieback or cracker with butter.

11:00 A. M.

Farina.

Hominy.

Cream of wheat.

Oatmeal.

Grape-nut, scalded with hot milk, in addition a cup of warm milk, 6 ounces.

2:00 P. M.

A soup, a meat, a vegetable, and a cracker. Beef or chicken soup, thickened with split peas, sago, rice, or farina.

Clear broth, with yolk of egg, or one or more ounces of expressed beef blood.

Oyster or clam broth.

Joint of chicken.

Broiled halibut.

Raw scraped steak.

Chicken jelly or calf's foot jelly (without wine flavor).

Baked Potato with butter.

Spinach or carrots.

6:00 P. M.

Crust of bread or zwieback.

Warm milk, with white of egg, or cocoa.

Junket, custard, corn starch, tapioca, or farina pudding.

Drink of water with each meal.

# Paragraph 670

DIET FOR CHILD FROM THREE TO TEN YEARS.

A child of three years, excepting in rare instances, should not be fed oftener than three times a day. The best time for feeding is: Morning meal, 7 to 8 A.M.; noon meal, 12 to 1 P.M., and evening meal, 5:30 to 6:30 P.M.

In rare instances, fruit or a cup of milk may be allowed between the noon and evening meal. In the majority of cases five hours are required to fully digest the food given.

The morning meal should consist of a fruit, a small dish of cereal with cream, a cup of milk, and a piece of toast or crackers.

The noon meal should consist of a plate of soup, a small portion of meat, a small potato, a vegetable, bread or crackers, or stale sponge cake, water.

The evening meal should consist of an egg or pudding, a cup of cocoa or milk, crackers or bread with butter or honey.

. It is safer to give a light meal in the evening rather than load the stomach with heavy food. The American custom of eating dinner at night should not be applied to children.

That milk is very absorptive is well recognized. It is a bad precedent to store it away in refrigerators unless it is placed in sealed jars, apart from food which exude odor.

Selection can be made from the following diet list:

# · Paragraph 671 MORNING MEAL.

Fruit—Raw, stewed, or baked apple; grapes, grapefruit, oranges, cherries, peaches, banana, stewed prunes.

Cereals—Hominy, oatmeal, farina, force or wheat flakes, celery food, shredded wheat, cream of wheat, wheaten grit, arrowroot, yellow Indian meal, white Indian meal.

Buttered toast.
Albert cakes.
Zwieback.
Vienna bread and butter.
Egg in any form.

Paragraph 672
NOON MEAL.

Meat or chicken soup, thickened with lentils, peas, split peas, sago, farina, rice or egg.

Meat—Broiled chop, steak or fish; chicken, stewed tripe, sweet-bread, raw scraped beef, roast beef, ham or bacon, lamb, bone marrow.

Baked or mashed potatoes, spinach, peas, beans, tomatoes, cauliflower, carrots, asparagus, rhubarb, cranberries, or celery.

Apple cider, buttermilk, kumiss, seltzer, lemonade, or very weak tea.

Stale sponge cake. Lady-fingers. Nuts.

Paragraph 673
EVENING MEAL.

Crackers and milk.
Custard.
Cornstarch pudding.
Corn muffins.
Farina pudding.
Milk toast.

Tapioca pudding. Chicken jelly without wine.

Calf's-foot jelly without wine.

Junket.

Oysters.

Broiled, scrambled, or poached eggs.

Cream of barley.

Cream of rice.

Cocoa and milk.

Toast or crackers.

# Paragraph 674 PEPTONIZED MILK.

Contents of 1 peptonizing tube (manufactured by Fairchild Bros. & Foster.)

1 teacupful cold water,

l pint Milk, fresh and cold.

Put the powder contained in the tube into a clean quart bottle, add the cold water and shake well; then pour in the milk and again shake the mixture thoroughly. Place the bottle in water of about 115 degrees F. (or as hot as the whole hand can be held in it for one minute without discomfort), and keep the bottle there for twenty minutes. Have the water come up on the sides of the bottle or above the level of the milk in the bottle. Now take the bottle out of the warm water and place it immediately on ice. Peptonized Milk should have a slightly bitter taste. This bitter taste may be overcome to some extent by the addition of sugar.

# Paragraph 675

#### OATMEAL WATER.

3 tablespoonfuls Oatmeal,

1 quart of cold water,

A pinch of salt.

Wash the oatmeal thoroughly. Cook in a double boiler for two hours down to one pint, adding a little boiling water from time to time. Strain through muslin. When strained, add enough boiling water to make quantity up to one quart.

#### Paragraph 676

OATMEAL-GRUEL (JELLY).

3 tablespoonfuls oatmeal (thoroughly washed),

1 quart cold water,

A pinch of salt.

Cook in a double boiler for two hours down to one pint, adding water from time to time. Strain through muslin.

#### Paragraph 677

#### SCRAPED BEEF.

A piece of lean round steak is very slightly broiled; the browned greased outside portion is

cut away; then with a knife or fork the rare part is scraped or shredded. One teaspoonful to one table-spoonful may be given (well salted) to a child of eighteen months.

# Paragraph 678

PLAIN CUSTARD.

½ cupful milk,

l yolk of egg, or from 1/2 to 1 egg,

l tablespoonful sugar,

14 teaspoonful vanilla, or grating of nutmeg.

Scald the milk. While scalding, beat the eggs, add the sugar, mix well. Add the scalded milk slowly, stirring all the time. Pour into a baking dish, put into a pan of hot water, and bake until the custard is firm. Test by inserting the point of a knife in the center. If knife blade is clean upon withdrawal, the custard is thoroughly cooked.

# Paragraph 679

CHOCOLATE CUSTARD.

1/2 cupful milk,

l yolk of egg

1 tablespoonful sugar,

1 tablespoonful scraped chocolate.

Melt the chocolate over hot water. Dilute with scalded milk until of the consistency to pour. Add the chocolate to the egg, and finish according to the general directions given for plain custard.

#### Paragraph 680

BAKED CUSTARD.

l egg,

1½ tablespoonful sugar, 2/3 cupful scalded milk, Nutmeg or cinnamon to flavor, Small pinch of salt.

Beat the egg slightly, add the sugar and salt. Add hot milk gradually, and pour into small buttered moulds. Sprinkle with nutmeg or cinnamon, set in a pan of hot water, and bake in a slow oven, or until firm. Remove from the mold for serving.

Paragraph 681

SAGO PUDDING.

l pint of milk,

1% ounces of sago,

1% ounces of butter,

2 eggs,

l teaspoonful sugar.

Cook 1% ounces of well-washed white sago in a pint of milk. Stir often to prevent burning. When the sago becomes tender, place it in a dish to cool. Add 1% ounces of butter and stir until it froths. To this, add the yolks of 2 eggs, one after the other, I teaspoonful of sugar after each egg, and lastly whip the whites of the eggs, and stir them in. Bake in a well-buttered form with moderate heat for three-quarters of an hour.

# Paragraph 682

CORNSTARCH PUDDING.

l pint of milk,

2 tablespoonfuls cornstarch,

l level tablespoonful cane-sugar, Flavor to taste.

With one pint of milk, mix 2 tablespoon ('uls of cornstarch and one level tablespoonful cane sugar. Flavor to taste; then boil the whole eight minutes; allow to cool in a mould.

# Paragraph 683 CUSTARD PUDDING.

l egg,

1 teaspoonful sugar,

4 ounces milk.

l teaspoonful flour (if desired).

Break the egg into a teacup and add the sugar, beating thoroughly. Add the milk, stir, and then tie over the cup a small piece of linen; place the cup in a shallow saucepan half full of water, and boil for ten minutes. If it is desired to make a light batter pudding, a teaspoonful of flour should be mixed with the milk before tying up the cup.

#### Paragraph 685

NAVY BEAN SOUP.

2 ounces (4 tablespoonfuls) navy beans, 1½ pints of water,

Page Two Hundred Sixty-two

- 1 cupful meat broth,
- 1 teaspoonful butter,
- 1 teaspoonful flour,
- 1/2 teaspoonful salt,

Soak two ounces of beans in cold water, drain off, and cook them slowly in 1½ pints of water until they are soft but not broken. Rub through a sieve, add 1 cupful of meat broth, and cook for one-half hour, adding more broth if it boils away. Mix together 1 teaspoonful of butter, 1 teaspoonful flour, and ½ teaspoonful salt, and add to the soup. Return to the fire and cook for a few minutes.

# Paragraph 686

VEAL AND VEGETABLE BROTH WITH FARINA.

l pound of veal,

1 quart of water,

Cook two to four hours and drain off broth

1 medium sized potato,

1 carrot,

14 cupful dry farina,

A pinch of salt.

Scrape the vegetables, cut into small pieces, and cook in double boiler until tender. Strain through a fine strainer, add this to the meat broth and reheat. When hot, add ¼ cupful of farina and cook for one hour. Season.

# Paragraph 687

FARINA MILK GRUEL.

% pint of milk,
l tablespoonful farina,
A pinch of salt.

Put ½ pint of milk in double boiler or in a saucepan, and heat it to the boiling point over hot water. Sprinkle into the milk a tablespoonful of dry farina, and cook for twenty minutes, stirring frequently.

# Paragraph 688 POTATO SOUP.

- 6 medium-sized potatoes.
- ½ pint chopped celery,
- l slice of onion (if desired).
- 1 tablespoonful butter,

1 tablespoonful flour,

1½ tablespoonfuls salt,

1 quart of milk.

Pare the potatoes and put in a stew-pan with the celery and the slice of onion. Cover with boiling water and put over a hot fire. Cook thirty minutes. Reserve half a cupful of the milk cold and bring the rest of the milk to the boiling point in a double-boiler. Mix the flour with the cold milk and stir into the boiling milk. When the vegetables have been cooking thirty minutes, pour off the water, saving it to use later. Mash and beat the vegetables until fine and light, then gradually beat in the water in which they were boiled, rub through a puree sieve; put back on the fire. Add the salt and whip with an egg-beater for three minutes, then gradually beat in the boiling milk. Add the butter and serve at once.

# Paragraph 689

# VEGETABLE SOUP.

1/4 pound lamb,

1 potato,

l carrot,

2 stalks celery,

1 tablespoonful pearl barley,

2 tablespoonfuls rice,

2 quarts water,

A pinch of salt.

Cut the vegetables into small pieces, add these with the barley and rice to two quarts of water, and boil down to one quart, cooking three hours. Add a pinch of salt and strain before serving.

#### Paragraph 690

VEAL BROTH FOR DELICATE CHILDREN.

1 pound of veal,

1 quart of water,

A pinch of salt,

6 teaspoonfuls of cream.

Veal broth may be made in the usual way, carefully skimming off all the fat; 2 drops of cream may then be added to each ounce of broth. Sugar may be added if indicated.

# Paragraph 691

#### CHICKEN BROTH.

l small chicken, or ½ large fowl,
l quart of boiling water,
A pinch of salt.

Remove the skin and fat from the chicken or fowl, and chop bones and all into small pieces.

Add I quart boiling water and the salt. Cover and allow to simmer over a slow fire or in a double boiler for two hours. After removing from the fire, allow to stand for one hour and then strain.

While cooking, add water if necessary, from time to time so that there will be one pint when finished.

# Paragraph 692

# GREEN PEA SOUP.

l pint shelled peas,

1½ pints boiling water,

.1 quart milk,

1 slice onion,

2 tablespoonfuls butter,

1 tablespoonful flour,

A pinch of salt.

Put the peas in a stew-pan with the boiling water and a small slice of onion, and cook until tender, which will be about thirty minutes. Pour off the water, saving for use later. Mash the peas fine, then add the water in which they were boiled, and rub through a puree sieve. Return to the saucepan, add flour and butter (beaten together) and the salt. Now gradually add the milk, which must be boiling hot, beat well, and cook ten minutes, stirring frequently.

# Paragraph 693

#### STEWED PRUNES.

½ pound prunes,

1 pint water,

1 teaspoonful sugar.

Stew the prunes until quite soft, and then rub them through a coarse sieve. Put this pulp back in the water in which the prunes were cooked, add the sugar, and boil again for about ten minutes.

Paragraph 694

APPLE SAUCE.

6 apples,

1 cupful cold water,

l cupful sugar.

Pare 6 apples and cut them in quarters. Place them in an enameled dish, add 1 cupful cold water and 1 cupful sugar, and boil about thirty minutes.

Paragraph 695

BEEF JUICE.

14 to 12 pound round steak, 1 pinch salt.

or

l pound round steak,
l pinch salt,
Cold water to cover.

Method 1—Broil slightly ¼ to ½ pound round steak cut in small pieces, and then press out the juice with a meat press or potato ricer, and add a pich of salt. Serve fresh, or warm.

Method 2—Put 1 pound of finely chopped round steak in a covered jar, pour in enough cold water to cover it, and add a pinch of salt. Cover the jar and let it stand on ice for six hours or more, shaking it from time to time. Strain the contents of the jar through a piece of cheese-cloth. When made by this method the beef juice is not quite so palatable, although children do not seem to object to it, and it has the advantage of being more nutritious, and much more economical.

Beef juice can be warmed slightly by pouring it in a small cup, and then placing this in a larger one containing warm water. It should, however, not be warmed enough to coagulate the albumin.

# Paragraph 696

LIME WATER.

l tablespoonful of slaked lime,

l quart of boiled distilled water.

Put the lime and water in a bottle, cork, and shake thoroughly two or three times during the

first hour. The lime should then be allowed to settle, and after twenty-fur hours the upper clear fluid poured off into a glass-stoppered bottle. Keep tightly corked and in a cool place.

# Paragraph 697

WHEY.

1 quart of milk,

l teaspoonful essence of pepsin.

Curdle I quart of new milk at 104 degrees F. with Fairchild's essence of pepsin. Let it stand for one-half hour, and by this time the milk coagulates. Then pour the whey off, or hang the curdled milk in a straining cloth and let the whey drip out.

Paragraph 698
JUNKET.

This is a healthy dessert made simply of pure milk and sufficient junket tablet to coagulate the milk. It is nutritious and easily digested.

Milk or cream that has been boiled or sterilized cannot be used in making junket, and care must be taken not to heat the milk more than lukewarm, as hot milk spoils the action of the tablet.

# Paragraph 699

LAMB OR VEAL BROTH.

1 pound of veal or lamb,

1 quart of cold water,

A pinch of salt.

Chop the meat fine and add to the cold water with a pinch of salt; cook slowly for two or three hours in a double boiler. Add water, if necessary, from time to time, so that when finished there will be 1 pint of broth; strain, and when cold, skim off the fat.

#### Paragraph 700

ALBUMIN WATER.

% cup boiled water,
l egg (white),
Pinch of salt.

Divide the white of one fresh egg by cutting it in several directions with a sharp steel knife. Add ½ pint of cold boiled water and a pinch of salt. Shake thoroughly and serve cold, either from the bottle or a spoon.

Paragraph 701
NUTRITIOUS ORANGEADE.

l egg (white),
l teaspoonful sugar,
Juice of l orange,
5 ounces of water.

Beat the white of one raw egg with one teaspoonful of granulated sugar, and add the juice of lorance and 5 ounces of water. Serve cold.

Paragraph 702
RICE WATER.

l heaping tablespoonful of rice,
l pint of water,
A pinch of salt.

Wash one heaping tablespoonful of rice, soak over night, drain and add a pinch of salt. Cook in a double boiler for three or four hours, or until the grains of rice are quite soft. Add water from time to time to keep the quantity up to one pint. Strain through muslin.

# Paragraph 703 IMPERIAL GRANUM.

1 or 2 tablespoonfuls Imperial Granum,
1 pint of water.

Mix the ingredients, cook thirty minutes, and add enough water to make a pint.

# Paragraph 704

MALTED MILK AND CHOCOLATE.

- 2 teaspoonfuls malted milk,
- 1 teaspoonful chocolate,
- 5 teaspoonfuls cream,
- 2/3 cup of hot water.

Mix the malted milk and chocolate, and add cream to make a paste, then add hot water.

Paragraph 705
CATNIP TEA.

l tablespoonful catnip leaves,
l pint of boiling water.
Pour the boiling water over the leaves,

Page Two Hundred Sixty-eight

allow to steep for five minutes, strain, and serve. This is efficient in relieving colic in infants when given by mouth or when used as an enema.

Paragraph 7.6 SAGE TEA.

l teaspoonful of sage leaves,
l pint of boiling water.

Pour the water over the sage leaves, steep five minutes, strain and serve. Good in cases of flatulence and sometimes allays nausea.

Paragraph 707
TOAST WATER.

2 slices of stale bread, 1 cupful of boiling water, A pinch of salt.

Cut the stale bread into one-third inch cubes, and remove the crusts. Dry thoroughly in a slow oven until crisp and a delicate brown. Break into crumbs, add the water, cover, and let stand one hour. Strain through a cheese cloth, season, and serve hot or cold. This often proves efficient in cases of nausea.

Paragraph 708 SOFT COOKED EGGS.

l pint water,

l egg.

Method 1—Put on pint of water in a saucepan. When it boils remove the saucepan to side of range, put in one washed egg, and let it stand from five to ten minutes, according to consistency desired. Serve in heated egg-cup.

Method 2—Wash one egg and put in a saucepan with one pint of cold water. Bring to boiling point. Remove from water and serve in heated egg-cup.

Paragraph 709
POACHED EGG.

l egg,
l slice toast,
Parsley,

A pinch of salt.

Into a shallow pan of boiling water break

one egg. Remove the pan to a place on the range where the water will not boil, and let it stand until the white is coagulated and a thin film is formed over the yolk. Lay a neatly trimmed piece of toast on a skimmer, dip it in the hot water to soften, place it in the middle of a hot plate, remove the egg carefully with the skimmer, and place on the toast.

Paragraph 710
CODDLED EGG.

l egg,

l pint water.

Into a saucepan of boiling water, a fresh egg is placed without removing the shell. The water is immediately removed from the fire and the egg is cooked slowly in it for five minutes. The white should then be of jelly-like consistency.

# Paragraph 711 GRUEL.

Add two tablespoonfuls of cereal—barley, oatmeal, farina, etc.—to a quart of water. Boil down to a pint and strain through muslin or cheese cloth.

# Paragraph 712 BOILED CARROTS.

½ pound carrots,

1 pint meat broth,

1 teaspoonful bread crumbs,

l teaspoonful butter,

A pinch of salt.

Cook ½ pound of carrots in a pint of fat-free meat broth or slightly salted water, adding more if it boils away. Rub through a sieve, add 1 teaspoonful of bread crumbs, 1 teaspoonful of butter, and a pinch of salt. Reheat and serve.

# Paragraph 713

BOILED BEETS.

6 young tender beets,

1 quart of boiling water,

 $\frac{1}{4}$  teaspoonful salt,

2 teaspoonfuls melted butter. Cut off the top at least one inch from the

root, as this will prevent the loss of juice in cooking. Wash the root carefully without bruising it. Cook in boiling salted water until tender. This will require from forty-five minutes to one hour. Remove the skin, cut into small slices or squares, and serve plain or with a small amount of melted butter. These may be added to the diet of a a child five years (or more) of age.

# Paragraph 714 CREAM OR WHITE SAUCE.

(To pour over any vegetable.)

½ cupful milk or thin cream,

½ tablespoonful butter,

1/4 saltspoonful salt,

½ tablespoonful flour.

Scald the milk. Melt the butter in a saucepan, remove from the stove, add the flour, then gradually the scalded milk, place in a double boiler over the fire and cook, stirring constantly until smooth.

# Paragraph 715 EGG POACHED IN MILK.

l egg,

1½ teaspoonfuls butter,

1/2 cupful milk or thin cream,

A pinch of salt,

l slice of toast.

Melt the butter in the top of the double boiler, add the milk or thin cream, and when hot carefully drop in the egg. Cook until the white is nearly firm, keeping it just below the boiling point. Add the salt and serve on toast.

# Paragraph 716 STEWED TOMATOES.

2 tomatoes,

1 ounce cracker crumbs,

1 teaspoonful butter,

1/4 teaspoonful salt,

½ teaspoonful sugar.

Pour boiling water over the tomatoes, peel, stew for twenty minutes, stirring occasionally.

Add a few bread crumbs or crackers and season with salt and butter. A small amount of sugar may be added if the tomatoes are very acid.

Paragraph 717 SQUASH.

1 small squash,

l pint water,

1/4 teaspoonful of salt,

l teaspoonful butter.

The various varieties of the summer squash are generally cooked when so small and tender that the thumb-nail can easily pierce the rind.

To prepare for the table, wash the squash, remove the rind, cut into small pieces, and either cook in boiling water or steam. It will cook in boiling water in thirty minutes, while about an hour is required if cooked in the steamer. The cooked squash is mashed fine, and seasoned with salt and butter. This method gives a delicately flavored dish.

#### Paragraph 718

ORANGE GELATIN FOR OLDER CHILDREN.

1/2 box shredded gelatin,
1/2 cupful cold water,
Juice of l lemon,
2 cupfuls boiling water,

l cupful sugar,

l cupful orange juice.

Soak the gelatin in the cold water thirty minutes. Add the boiling water and dissolve. Then add sugar and fruit juice, strain through a fine strainer (or a cloth) into molds, and set away to harden.

Paragraph 719
PRUNE JUICE.

1/2 pound prunes,

1 tablespoonful sugar.

Wash thoroughly ½ pound of prunes, cover with cold water, and soak over night. In the morning, place on the stove in the same water, and cook until tender, add l tablespoonful of sugar and strain.

Paragraph 720
PRUNE GELATIN.

1 pound prunes,

l quart water,

½ box gelatin,

l cupful sugar.

Place the prunes in a quart of water and cook slowly until tender. Remove from stove, drain off the liquid, set aside. Remove the stones from the prunes and push the pulp through a sieve. Add the pulp to the liquid, and bring the whole to a boil again. Pour this boiling mixture on ½ box of gelatine which has been previously soaked in cold water. Add the sugar and stir to dissolve. Strain and allow to stand until firm.





# PART IV.

Part IV contains a miscellaneous selection of articles pertaining to the training and care of children. These special subjects fulfil every requirement, and gives the mother complete instructions on all important rules for nursing; such as, the administration of drugs, making and applying local applications, medical treatment for common and special diseases, the administration of food, accidents and habits relative to children; in fact, it gives everything required to work in harmony with Part I., II. and III, together with many special subjects of vital importance for the mother to know.



# THE TRAINING OF INFANTS AND CHILDREN

# Paragraph 721

The responsibility of the mother or nurse in giving the infant or child proper training cannot be over estimated. As we have said, they are creatures of habit, and the wrong habit once formed oftentimes requires months to make it right. So begin right, and start early in life with the infant, then the task is not a difficult one.

During the first six months do not try to amuse the baby, or give it toys to play with, as it will only make it fretful and disturb its sleep and rest. After five or six months supply it with toys that make a noise. At this age infants enjoy animals, dolls, blocks, beads, and various little trinkets painted in bright colors.

After the child is two or three years old, furnish it with a playground containing swings, tents, play-house, and sand-pile. It will give the child much pleasure, as it will spend a great deal of time in play. Remember that part of a child's training is teaching it to play, because it comes natural to the child, and should be encouraged.

Many mothers and nurses spend a great deal of time in trying to teach babies to do things that are far beyond their age and ability. Let the infant take its.time to develop. Let it creep when it gets ready to creep; let it walk when it desires to do so, and the same with talking—do not try to teach a baby to talk too early because it will learn when the proper time comes. As we have said, there is no set time when each individual infant is going to creep, walk or talk. Remember and give the child time for physical development, and do not overtax its mental facilities.

#### Paragraph 722

Great care should be exercised in regard to word or action before children—let us impress

upon you this important point—because they are wonderful imitators and learn from example.

Mothers, fathers, or nurses must expect a child to do and say what they do. Remember that continuous example conveyed by habits moulds the character of the child. Therefore, you should remember that example is one of the most forcible and lasting instructors. Whatever the child sees you do, it will imitate, and will say what you do, doing so unconsciously.

#### Paragraph 723

A child will grow up and become like those with whom they are daily associates, and the examples that are set forth in domestic training does more in influencing that little individual in forming the moral character of the future men and women than any education that it may receive in school or college. Trivial matters, as they may seem, become of great importance to the little one, and contributes much to its character for better or worse.

Let it be remembered that the acts and deeds done by the parents often remain with the child through life, and the acts of affection, discipline, and self-control are the things that count in developing the character of the child, because those things are going to remain with it. All else which it may learn may be forgotten, but not the examples taught by mother, father, or nurse.

#### Paragraph 724

In training a child right from wrong, harsh punishment has no place. A child knows nothing about right and wrong, and follows its natural inclinations. If these inclinations lead the child in the wrong direction, then it is the parents' duty to guide it into another and better one. Divert its energies in a wholesome and normal direction. This is true in the training of infants and children of all ages. We so often see parents who believe in forcing with penalties to the point of cruelty in teaching children right from wrong. They forget that a child is endowed with all the desires, in-

# TRAINING OF INFANTS AND CHILDREN

clinations and tendencies that they have themselves. Remember that a few kind words will do more good than a dozen punishments.

# Paragraph 725

An infant should be taught, the first few months, the law of obedience, and authority alone should govern a child because it is not capable of reasoning, and argument accomplishes nothing. A child must be taught to obey. It must, or it must not do certain things. Govern children with love, not with the rod, and if children are taught real love for their parents, they will obey them, whose word should be law. Here the mother must use a great deal of tact and reasoning. Do not put too many ''Don'ts'' before a child.

#### Paragraph 726

Be sure and weigh all conditions well before any threats of punishment are made, in order to govern the child, but when once made, punishment should be administered right after the offense, but never in anger. If a child disobeys, and has been told it will be punished if it does disobey, then see that these rules are followed out to the letter. If the punishment was to be that the child was to be put to bed, or remain in the house for the rest of the day, required to stand in the corner, or whatit may be, do not fail to see that the child does exactly what it has been promised if it disobeys.

If there is good management on the part of the nurse or mother in the early life of the little individual, there will be very few punishments, and the child will be obedient. If you want a child to do a certain thing, do not tell it a falsehood in order to accomplish your aim. Be truthful at all times to children, and never make a promise to them that you do not fulfill.

#### Paragraph 727

Early in life, as early as two or three years old, the child should be taught to think and do for others. As a rule children are selfish and this is perhaps the hardest lesson they are required

to learn, especially giving up their playthings to other children, or to divide its pleasures with others. Yet the child should be taught thoughtfulness, gentleness, kindness, love and sympathy for its playmates. It should associate with children whose habits are good. Give the child sufficient time and attention to teach it not to be selfish. Arrange to allow it to have some responsibility or care of some playmate, or a pet of some kind—something for it to care for—as this will be the best means to accomplish this end.

Some children are more boisterous than others, and naturally are inclined to be noisy during play. When necessary, they can be taught that they can get just as much pleasure out of play by being reasonably quiet as they can by making undue noise.

# Paragraph 728

While talking about the training of children, let us mention a very important point, and that is ''fear.'' Never frighten a child, or let a child be frightened. Teach a child to have no fear of animals, and that there is nothing more in the dark than there is in daylight. Discard all the ghost and 'boogie man' stories; never mention such things to little children.

Never say to a child, "If you don't do so and so I will send for the Doctor and have him cut your ear off," or something of that sort. So many times parents turn the child against physicians by making such remarks, and in case they do require medical attention, the doctor can never examine them or treat them intelligently, and the mother is to blame. Children should be taught that the doctor is their best friend.

#### Paragraph 729

The society that a child should enjoy should be very limited until it is at least 18 months to 2 years old. Up to that time it should see just enough people to teach it not to be in fear of strangers. Even after that age, the presenting of children to visitors only has a tendency to develop a forward child who continually shows off before strangers or visitors. This should be guarded against.

# TRAINING OF INFANTS AND CHILDREN

# Paragraph 730

In conversing before children, great care should be taken as to the remarks made in regard to them, because it is surprising how well they interpret conversation. A child should be taken out by its parents to visit cafes, theatres, parks, etc., and let it mingle with people and see how others do. It broadens the child's ideas, and gives it a force of character that will last a life time. All this should be done with great care and judgment upon the part of the parents.

# Paragraph 731

The school life of every child is of great importance, as it is during these years that a child develops and forms the character of associates together with its home training, which means for better or worse. It requires a great deal of care to be exercised to guide a child through these important years. Do not send a child to school too young simply to have it somewhere out of the way, so to speak.

Remember we have just said that the home life molds the character of the little one, and that is why it should get its first lessons there, so that home influences should remain with it the rest of its life. It is impossible, and not intended, that institutions of learning should so thoroughly influence the character and general actions and intellect of the child as well as it can be received at home.

#### Paragraph 732

We do not believe in the kindergarten being used for real young children. Let the child first get its physical condition normally. Do not destroy the nervous system by calling upon the little one for too much mental work. What difference does it make at what age the child learns to read. One child may be developed sufficiently to accumulate sufficient knowledge to be able to read at seven years and others at nine.

Do not let a child have books too early—develop the body first. It is better to teach it to

play than to teach it to read, as is often the case When a child is seven or eight years of age, it is plenty of time to give it some actual work to do (that is study), and at that age the time should be short. Two or three hours a day is sufficient, but even the mental training should not be at the expense of the physical. In other words, look after the child's health.

#### Paragraph 733

We believe, at the present day, the schools require too much mental work for children with growing brains. When they begin school life they should not study at home; give that time to play and outdoor exercise. Build up the physical part of the child, both in boys and girls. The general health of the child and care of the eyes during school work should not be overlooked, because many children attending school have weak eyes, and they are often neglected. Children with any eye trouble should be examined by an eye specialist. School instructors should realize these facts, and they should take every precaution to care for the child's health. It is the mother's and father's duty to see that this is accomplished.

# Paragraph 734

Great care should be taken of the child's diet while attending school. See that it gets the right combination of food. The child should eat regularly and, when possible, should have warm meals at lunch time instead of eating cold lunches.

When you take into consideration the physical, as well as the mental training of the child, you have a great responsibility, and one that requires a great deal of care and attention on the part of the nurse or mother, and you should become familiar with this most important subject.

# Paragraph 735

THE HEALTHY INFANT. A great many children are born healthy regardless of the mother's health. Take a woman who has consumption, heart disease, or starvation; children born of such mothers, we invariably find, are very healthy, yet the mother is

# TRAINING OF INFANTS AND CHILDREN

in a dying condition. You may take the slums of our great cities, where women live and exist under the most abnormal conditions, their babies are fat and chubby. Nature seems to give them a good start, and if they had the proper care they would do well, but the danger comes when they have to struggle with the difficulties of civilization.

#### Paragraph 736

A healthy baby eats, sleeps, and does not cry frequently or long; has normal bowel movements two or three times a day; stools are soft and yellow, never green, nor should they contain any white curds. Temperature should be normal; that is, not over 100 degrees per rectum. The pulse is variable. The skin is clear and without any spots or rash of any kind. The tongue and mouth are clean, without even one patch of white.

# Paragraph 737

A healthy baby increases in weight about seven ounces a week for the first three months, with the exception of the first week. You will notice this gain more regular in breast-fed babies than you will in bottle fed. In the latter the growth is more uncertain, about four ounces a week. The forehead should not be damp, nor should the baby sweat in its cot. If it does you will generally find that it is covered with too heavy clothing. We have noticed that babies fed continually on Eagle Brand Milk always sweat more freely. Most likely this condition is due to the tissues being full of water.

#### Paragraph 738

Now remember this, that the anterior fontanel (the soft spot on top of the head) is an excellent guide to tell the normal condition of the baby's health. When it is level with the bones you can be reasonably certain that you have a healthy baby. If it is depressed and sunken below the level, the child is in ill health. Sometimes in meningitis, and possibly before the baby has convulsions, the fontanel rises above the normal level of the bones, or it bulges. So when you are in doubt as to whether a baby is sick or well, take all these things into account and it will assist you greatly.

# Paragraph 739

#### DON'TS.

DON'T feed the baby too often or too much.

DON'T let a baby be over twenty minutes at the breast or bottle at one feeding.

DON'T let a baby have an empty bottle to suck.

DON'T give it a pacifier, mother's comfort, or any such device for keeping it quiet. It will not need them if properly cared for and fed.

DON'T let it suck its thumb. It spoils the shape of the mouth.

DON'T let it go even a day without a drink of water. Give a teaspoonful occasionally.

DON'T let it sit on the floor on cold days, especially if there is no carpet, unless there is a blanket or pad under it.

DON'T let it sit in front of an open window, with the air blowing on it.

DON'T let it sit in a draft between open window and door.

DON'T let it play with matches, pins, scissors or sharp-pointed objects.

DON'T urge it to stand on its feet too young. If you do it may become bow-legged.

DON'T give it solid food before one year, and then sparingly.

DON'T give it candy, chocolate or sweet things.

DON'T let it lie in a wet napkin.

DON'T use a soiled napkin the second time before washing it.

DON'T let the hands and feet get cold.

DON'T give it tea or coffee, beer, whiskey, gin or any drink containing alcohol.

DON'T neglect giving the baby a tub bath every day.

DON'T forget to leave the windows open day and night.

DON'T allow a child to take vigorous exercise after meals.

DON'T allow a child to sleep with anyone. Let it sleep alone as much as possible.

DON'T lay a child on a feather pillow. Lay it on a firm bed.

DON'T give soothing syrup to make the baby quiet.

DON'T neglect to keep a child's mouth and teeth clean. This furnishes the best protection against disease.

DON'T give a child drugs for its appetite, until all other means have failed.

DON'T feed a child candy, cake, crackers, etc., between meals.

DON'T feed all children of the same age alike, be governed according to size and health.

DON'T let the good women of the neighborhood tell you what disease your child is suffering from, and how to treat it.

DON'T belittle the gravity of a sore throat; give it careful attention at the beginning, and medical aid if necessary.

DON'T put well children with sick ones so that they may catch the disease and be over with it.

DON'T let your children play with cats and dogs that are in the habit of running about. It is best to bar them altogether as they carry disease.

## Paragraph 740

BABY'S BASKET. It should contain the following articles: Alcohol for dressing the cord; plain absorbent cotton for washing the mouth and eyes; blunt-pointed scissors; safety-pins of assorted sizes; a baby's soft hair-brush; a small fine comb; a powder box containing powder and puff; soap in a metal or celluloid soap-box; a fine soft sponge, and a soft wash-rag; vaseline in a jar or tube; a soft blanket in which to receive the child after birth; a woolen shawl or shoulder blanket; a complete suit of clothes.

## LECTURES OF INTEREST TO WOMEN

## Paragraph 741

LONG CLOTHES.	The following list	of clothing
(the layette, as it	s commonly called)	may be con-
sidered one of avera	ge size:	

Flannel binders	3			
Knitted bands				
Diapers (two sizes)	4	doz.	or	more
Shirts				
Petticoats (flannel)	4			
Petticoats (cambric if		•		
desired	4			
Slips	4	•		
Socks	6	pair		
Night-gowns	6			
Wrappers	2			
Sacks, knitted	2			
Cloak	1			
Hood	1			
Mittens	2	pairs		
Veils	2			
Shoulder blankets	2			
D 1 745				

## Paragraph 742

SHORT CLOTHES. The following list may serve as a guide to the number of garments needed for short clothes:

Knitted binders4
Diapers 4 doz.
Shirts, close fitting 6
Petticoats (flannel) 4
Petticoats (cambric if desired) 4
Dresses 8 to 12
Stockings 8 to 12 pairs
Shoes 2 pairs
Drawers (if desired) 8 to 12 pairs
Creeping aprons
Wrappers3
Sacks 3
Bibs12
Night-gowns 6
Cloak or Coat 1
Hood or Capl
Leggins l pair
Veils · 2
Mittens 2 pairs

## Paragraph 743

TIME FOR CHANGING. The time for changing from the clothing of infancy to that of childhood depends not so much upon the age as upon the time when the baby learns to do without a diaper.

## Paragraph 744

WHEN A BABY SHOULD BE PUT IN A HIGH CHAIR. Do not allow a baby to sit in a high chair until it is old enough to be able to hold its head and spine erect. It should never be left in a high chair for any length of time because there is danger of causing deformity by forcing the child to sit in a rigid position before the bones and muscles are sufficiently strong to stand it.

## Paragraph 745

HOW TO LIFT A BABY. The spine should always be supported in handling a baby. Slip the left hand under the back, underneath the shoulders, in such a way as to give the neck and head support. Place the other hand under the buttocks. Never lift a child without supporting it in this way. Do not place the hands under the arm pits, or attempt to lift it in that manner without any support. Also never try to lift the baby by the arms.

#### Paragraph 746

INFANT CREEPS. An infant begins to creep at the age of seven or eight months, on its hands and knees, and by nine or ten months it is often able to stand with support, and frequently to walk some steps by holding on to the furniture or someone's hand. At the age of one year, strong children can walk a little without help.

There is no absolute rule, however, for the time, or for the exact order of learning to creep and to walk. Many children are very slow in walking, particularly if they have become expert and rapid crawlers, while some do not creep at all, but learn to stand first and then to walk. Some creep only on the hands and feet, never using the knees; others never creep but progress over the floor with a peculiar pushing movement while in a sitting position.

#### LECTURES OF INTEREST TO WOMEN

## Paragraph 747

LENGTH OF INFANT. As to the length of a baby, we are struck by the fact that from the age of two to that of four months, the increase is one inch a month, and after this, up to one year, it is half an inch a month. The average length of an infant at birth is about 20 inches.

## Paragraph 748

INCREASE IN WEIGHT. During the first three weeks of the first month, the baby's gain in weight will average about one ounce a day; in the second month, about one ounce a day, and in the third and fourth months about five and one-half ounces a week; that is, about three-quarters of an ounce a day. By the time it is five months old it has doubled its original weight. In the fifth and sixth months it increases two-thirds of an ounce a day, and after this, from seven to twelve months, it gains at the rate of about one pound a month; that is, three and two-thirds ounces a week, or a trifle over a half ounce a day, except in the ninth and again in the eleventh month, when the increase in weight often lessens somewhat. At the age of one year the baby has trebled its original weight at birth.

## Paragraph 749

## SUCCESSFUL NURSING.

The chief signs of successful nursing are when a child is gaining not less than four ounces a week; after the baby nurses, it seems satisfied and will go so sleep without fussing or crying, and seems perfectly contented until the next nursing period; the stools are normal, and bowel movements occur two or three times daily.

#### Paragraph 750

#### UNSUCCESSFUL NURSING.

The most important signs of unsuccessful nursing are when the gain in weight is less than four ounces a week; the infant wants to nurse longer than the regular time, cries if removed from the breast, is not satisfied, very restless, and begins to cry before the next regular nursing period; the stools generally contain curds; there may be diarrhea or constipation; more or less colic, and they suffer a great deal with gas in the stomach.

## Paragraph 751

A NURSING MOTHER FREE FROM WORRY.

A nursing mother should be free from all worry, anxiety and nervous excitement, because such a condition has a marked influence upon the breast milk, and renders it poisonous, so to speak. She requires sufficient exercise, plenty of fresh air, the necessary amount of rest, and should be free from all worry in order to maintain the normal condition of the breast milk.

## Paragraph 752

#### INCORRECT DIET.

- 1. When baby seems alright, but it does not seem to gain in weight, increase its food. If there is still no gain in weight, strengthen its food in quality.
- 2. When baby is hungry, it cries, sucks its fingers, sleeps poorly, etc. Increase its food—first in quantity and then in quality.
- 3. When baby vomits immediately after being fed, it has been fed too much in quantity, or it has been 'bounced about' too soon after being fed. Milk mixture may be too strong.
- 4. When baby regurgitates sour milk between its feedings, the feeding contains too much cream, or milk mixture may be too strong.
- 5. When baby has colic after feeding, the food is too strong. Dilute the feedings more.
- 6. When baby is teething, has any fever, or does not feel well, the feedings should always be diluted, and in some instances to half strength.
- 7. When baby has no appetite, diminish the strength of food.

#### Paragraph 753

## HABITUAL LOSS OF APPETITE.

The growing child requires not only sufficient nourishment to sustain life, but it must also have enough to meet the demand for the increased growth; that is, it requires more food than the individual who has reached maturity. The young child is naturally a very hungry individual, and the required amount of food to sustain life, as well as to increase growth, is very essential.

When a child has habitual loss of appetite, and the condition of its health is abnormal, we must discover the cause and apply the proper remedy. A child suffering from a loss of appetite does not seem sick; it may be active and playful; sleeps normally; but it tires easily, and must be coaxed to eat.

Oftentimes children with poor appetites will give history of excessive milk drinking. The child will take several glasses of milk during the day and refuse all other food. Such a child, in all probability, was fed on milk exclusively for the first two years of life. These children will invariably show evidence of malnutrition. They are generally pale and sallow, with flabby muscles. Oftentimes the lack of appetite is due to a prolonged exclusive milk diet. It is for this reason that we refer to the danger of an exclusive milk diet in the treatment of typhoid fever.

Another cause of the loss of appetite is too frequent feeding. We often see children fed six or seven times in the twenty-four hours. Some parents think because a child takes a small amount of food, it should take it often, but the fact is, more and stronger food should be given at regular intervals.

Another very injurious habit that will cause loss of appetite, is eating between meals. Giving a child candy, cake, crackers, and fruit, also poorly cooked and prepared food (the kind generally eaten by an adult), will cause it to suffer from loss of appetite. Children living in flats and confined indoors a greater part of the time, as a rule, suffer from loss of appetite. Constipation is also another cause that may be added to the list.

#### Paragraph 754

TREATMENT. It is a mistake, when a child begins to lose its appetite, to give it drugs. The only medication that should be permitted is some simple laxative, like Phillips' Milks of Magnesia, 1 to 3 teaspoonfuls at bedtime. Every child should spend (when the weather will permit it) at least five hours each day in the open air, and in stormy weather it should have a play-room with perfect ventilation.

The next important step in the treatment is in the regulation of the feeding hours. After a child is running about, it should not be fed oftener than four meals during the twenty-four hours, and after the second year, only three meals a day should be given. All feedings should be given at a definite time each day. This is absolutely necessary, and nothing whatever should be allowed between meals, excepting drinking water.

In order to get the best results in increasing the diet, it is best not to give the full amount of food to start with, but place the child temporarily on a markedly reduced diet. Do not give any meat, eggs, bread-stuffs, vegetables, or fruits. At first, give milk, gruels, and broths. If it is a case in which the giving of milk has caused the loss of appetite, then no milk should be given, but the diet should consist of broths, thin gruels, dry bread, zwieback, etc. This should be kept up for about two days.

Oftentimes the child will become very hungry, then freer feeding is allowed, but under the same strict regularity as to time, and no feeding between meals. If these instructions are carried out to the letter, you will rarely find a case of habitual loss of appetite which will not respond to this simple method of treatment.

Sometimes the diet will not improve under such dietetic and hygienic measures as we have just given, and in that case a change of climate, in addition to the proper methods of feeding, will be of value; that is, a change from the city to the country, or from the country to the seashore. When such patients cannot make the climatic change, then we must arrange, as best we can, the hygienic surroundings to suit the individual case.

When hygienic, dietetic, or climatic treatment fails to increase the appetite, we have a few simple remedies of value, which may be used, especially in cases where it is impossible to have the climatic changes. For a child over eighteen months of age, give 1 grain of citrate of iron and 1 grain

#### LECTURES OF INTEREST TO WOMEN

of muriate of quinin, dissolved in half a teaspoonful of sherry wine. This should be given, well diluted, before meals. For younger children, half a grain of the iron and quinin may be given in half a dram of sherry wine well diluted, before meals.

If this treatment is not successful for a child over fifteen months old, and under two years, give 1 minim of dilute hydrochloric acid and a half minim of the tincture of nux vomica in 2 teaspoonfuls of water; after the second year, 2 minims of the diluted hydrochloric acid and 1 minim of the tincture of nux vomica in 3 teaspoonfuls of water. In either case it should be given before meals.

#### Paragraph 755

THE HYGIENE OF FEEDING. We have told you the kinds of food a child should have, and when it should be fed, but how it should be fed is entirely a different subject. A child should never sit at the table with adults until it can have adult diet. If possible, it should dine alone, or with other children. It is wrong to expect a hungry child of tender age to sit at a table and see and smell the fragrant dishes and not be allowed to partake of such food, but be forced to content itself, without complaint, with its restricted diet. This is not right, and it causes many tears, disputes, and encounters between parent and child, and today we see too much of this form a part of the daily routine of the life of childhood.

A child should be taught to use its spoon and fork when it begins to feed itself, but do not allow the fork or spoon to come in contact with anything but the food and child's mouth. Under no circumstances, should a feeding utensil be allowed to come in contact with the lips of the nurse or mother. How often do we see mothers, or even nurses, sip the first teaspoonful of food which is to be given to the child, to determine if it is the proper temperature, using the spoon to feed the child immediately afterwards. At other times, in order to get a child to eat, the mother will place the spoon in her own mouth as if intending to take it herself. Or she will remove from the spoon, with

her own lips, adhering particles of food. Any one of the many forms of bacteria may thus be readily transferred to the mouth of the child.

It is unquestionably a means of infection from the mouth, due to decayed teeth, tuberculosis, diphtheria or syphilis. The germs of tuberculosis and diphtheria are often found in the mouths of perfectly healthy adults. They cause no symptoms of disease, because the normal power of resistance of adults is able to overcome the infection, but such is not true of the child. Its resisting powers are very slight, and when these germs are carried to the delicate mucous membrane of the infant's mouth and throat, they thrive actively. The child develops diphtheria or tuberculosis, and the mother grieves and wonders how the child could have contracted such a disease. It may die and the mother will not know that she herself, infected the child, and caused its death.

## Paragraph 756 RECTAL FEEDING.

Nutrient enemas are necessary in cases where the stomach does not retain food, and the strength of the patient must be supported by taking the required amount of nourishment. Various kinds of food may be administered per rectum with some degree of success. It requires proper technic in order to get results, and it is necessary that the physician himself should see that the technic is properly carried out. When this is done, it is considered by good authority that one-fourth of the nutriment needed by the body can be absorbed by the rectum. The patient may not only be sustained by this method of feeding for several days, but can be kept alive for several weeks by exclusive rectal feeding; but when the technic is not properly carried out, and the rectum becomes irritated, the treatment is of little or no benefit.

The articles required to give a nutrient enema are a fountain syringe, or a funnel, with a soft rubber catheter attached, rubber sheeting or bed-pan; older children may need a hard rubber piston syringe.

#### Paragraph 757

TECHNIC. To give a nutrient enema properly. the rectum should first be thoroughly cleansed by administering a high injection of normal salt solution one hour before enema is to be given. This cleansing should be done at least once a day, and if much mucous is present, it is of great advantage to precede each feeding with a cleansing enema. If for any reason the rectum becomes inflamed, then boracic acid may be used instead of the salt solution, or bicarbonate of soda solution may be used. The strength required is I teaspoonful of either the boracic acid or bicarbonate of soda to a pint of water.

A very convenient way to cleanse the lower bowel is to use the return-flow catheter. In this way, several quarts of the solution may be used, when necessary, in marked catarrhal conditions, or when there is a great deal of mucous present. The temperature of the cleansing enema should be about 96 or 98 degrees F., the temperature of the enema to be retained, between 90 and 95 degrees. When the solution is too cold or too hot, it will not be retained. The patient should lie on the left side with the hips well elevated, at least four inches higher than the shoulders, and the funnel or fountain syringe should be between three or four feet higher than the child's body.

#### Paragraph 758

The rectal tube, or large size catheter with walls reasonably thick should be used, the size used according to the individual; that is the adult requires a much larger tube than a child. The tube used for children should be in proportion to their age; much smaller than the one used for adults. A No. 18 American soft rubber catheter is the correct size to use for a child 7 to 10 years old. It should be thoroughly lubricated with vaseline, and introduced into the rectum by twisting slightly. If it is not passed easily a small amount of the liquid should be passed in, which should balloon out the rectum, after which the tube may be passed with ease eight or ten inches. The tube should be intro-

duced as high as possible, because the absorption from the rectum is very little. The food should be allowed to pass quickly from a funnel or fountain syringe. Care should be taken not to allow any air to be injected with the fluid. It is as important to cover the anus with vaseline as it is to lubricate the tube.

After the injection, the patient should lie as quietly as possible for at least an hour and be instructed to try to retain the nutrient enema. A pad of gauze or a towel should be pressed over the anus for some time (20 minutes to a half hour), and the patient's mind, through suggestions along other lines, should be diverted from the subject. After a few feedings, the bowels become accustomed to the injections, and they are retained without difficulty.

When an enema is expelled immediately after it is given, it should be repeated in a very short time; that is, within ten or fifteen minutes, because when an enema is not retained, it is no sign that the next one will be expelled.

#### Paragraph 759

In older children, there may be more or less bearing down or straining, and to overcome this, use an ordinary hard rubber or glass piston syringe of sufficient size, with catheter attached. This kind of a syringe will provide sufficient force to overcome the pressure exerted by the abdominal muscles.

The amount to be given at one time is very important; it should not be over one pint. The amount is reduced until it is retained; only onethird of an ounce may be administered. The number of nutrient enemas required every day will depend upon the patient's condition.

Indications for nutrient enemas are extreme weakened conditions, caused by fevers of long duration, and the food cannot be retained by the stomach; when it is impossible to swallow, caused by tumors or paralysis; conditions like disease of the stomach, when it is important to give the stomach a rest; in severe forms of nervous dyspepsia or

irritable stomach; also in cases of vomiting, due to pregnancy, nutrient enemas may be given to supply nourishment to the body while the stomach cannot retain food. Oftentimes insane or delirious patients must be fed temporarily per rectum.

In children, nutrient enemas are used only temporarily (for two or three days), until the condition for which it was given shows signs of improvement.

## Paragraph 760

NOURISHMENT TO USE. Many nutrient formulas are given in various text books, but we think the best results are obtained by using peptonized skimmed milk. To peptonize milk for rectal feeding, add one-fourth of the contents of a Fairchild's peptonizing tube to four ounces of skimmed milk, or in like proportion. Place the pitcher, containing the solution, in water at a temperature from 110 to 120 degrees F., and let it remain for twenty minutes. It is claimed that skimmed milk is more completely assimilated than any other kind of food used for rectal feeding. It will give the patient the proper nourishment and strength better than any other kind of nutriment.

If it is desired that more liquid be absorbed by the intestines, the milk may be diluted by using a normal salt solution. Take two parts of skimmed milk and one part salt solution; this makes a very good preparation. Or when a large amount of liquid is required, equal parts of milk and normal salt solution may be used.

The white of an egg is also a good food, and it is the second choice when milk cannot be obtained. Take the whites of three raw eggs, and mix it with the required amount of normal salt solution. The white of egg can also be added to the skimmed milk; one or two as the case may require.

The nutrient enema is given every six to eight hours, and the amount used each time will vary with age and condition of the child. Two to four ounces can be given to a child up to three months of age; and from that time until the sixth

month, four to six ounces; from six months to two years, six to eight ounces, and after two years, eight to sixteen ounces.

## Paragraph 761

COMMON ERRORS IN FEEDING. The most frequent error in the feeding of infants and children, is over-feeding (giving more than is necessary), or a stronger mixture than a child is able to digest. Especially is this true at the commencement of bottle feeding; quantity is too large, and intervals between feedings are too short. It must also be remembered that children of the same age cannot all be fed alike. It depends upon the size and weight and general health of the child as to the amount of food required. Healthy children of equal weight will probably require the same amount of food, but the larger the child, the greater the amount of food required.

#### Paragraph 762

An infant that weighs fifteen ounces at six months, would require about 6 ounces of food, and this quantity should be diminished a half an ounce for every pound under this weight, until the total quantity is reduced to 4 ounces, and for every pound over fifteen, add a half an ounce to each additional feeding until the total is increased to 9 ounces. The number of feedings in the twenty-four hours should be the same for all children at a given age.

### Paragraph 763

Many children are kept on an exclusive milk diet until they are twelve months of age or older, which is wrong. Starches in some form should be added to the food at the seventh month, and under no circumstances, not later than the ninth month. A great mistake made by mothers is to allow a child, from the twelfth month to the third year, to have a diet composed largely of milk and not a sufficient amount of common cereals. How often we see children fed on crackers and milk, bread and milk, common and fancy crackers, during the very important period of their growth. Mothers should know that a high proteid food is necessary for the proper development of their children.

During infancy, milk answers well, but different kinds of food are required for older children. Eggs, cereals, broths, oatmeal, farina, etc., are absolutely necessary to normal growth. Another great error that a mother makes in feeding her child is the irregularity as to the time the food is given. The child should have its meals on the minute, at the same time each day. Disobeying this most important rule will promote a loss of appetite and indigestion.

Eating between meals, whether bread and butter, pastry, or confectionery of any kind, if practiced continually, is sure to be followed by indigestion and malnutrition. Never coax or force food upon a child. When the proper food is given at the correct time, the normal child will be hungry and will eat the required amount. If it is not hungry, then there is some cause for the loss of appetite, which must be discovered and receive the proper treatment.

# Paragraph 764 FORCED FEEDING.

Forced feeding or gavage (the technical name) is to introduce nourishment into the child's stomach by means of a tube. There are special tubes known as "stomach tubes" for children, or you may take a rubber catheter American No. 12, a piece of glass tubing about two inches in length and oneeighth inch in diameter; two feet of one-quarter inch plain rubber tubing, and a small glass funnel. Connect the catheter and tubing with the glass tubing and attach the funnel to the other end of the rubber tubing. An opening should be made in the catheter about one-half an inch from the original one, which will allow a more rapid introduction of the nourishment. The opening should be made with a small pair of curved scissors. The rubber catheter is dipped into the solution to be used and passed into the stomach, with the funnel empty, and the nourishment is immediately poured into the funnel. When the food has passed into the stomach the tube should be compressed and quickly withdrawn. It is necessary to compress it in order to keep the food

from escaping into the throat which would cause choking and perhaps vomiting.

The position of the child for gavage may be on its side, or it may rest on its back. It is well to wash the stomach out with warm water before each feeding. With infants without teeth, the index finger is all that is necessary to keep the mouth open. In children with teeth a simple mouth gag should be used. A sufficient quantity of water may be given with the nourishment selected, so that the child with hare-lip may get as much liquid as it is accustomed to in normal condition. The amount of food given should be a quantity suitable to the age of the child.

Before each feeding it is well to introduce a few ounces of water and withdraw it to see if any food of the last feeding is still in the stomach and if it has been properly digested. By this means of feeding, the child will make a regular daily gain, and in cases of severe illness, where the child seems to be too weak to swallow, there will be the proper assimilation of food if it is placed in the stomach. Therefore, gavage is useful in other cases besides hare-lip, and we should never say that any case of sickness is hopeless as long as the child is breathing. After a few days' feeding in this way the child will take food from the bottle or spoon. Breast milk can be given by gavage as successfully as modified cow's milk.

The food for forced feeding in hare-lip cases should be the same as that which is given in normal cases—breast or modified cow's milk. Forced feeding is given once every four to six hours, with from one-third to one-half the quantity of food given in health, and it may be employed advantage-ously for several days at a time. It is much superior to rectal feeding in children, because this can only be continued for a day or two, as it soon becomes intolerant, but gavage or forced feeding is the only way by which a child, who has hare-lip, or any severe illness like diphtheria, pneumonia, or grave intestinal diseases, can be properly nourished. In these cases, forced feeding may save the

life of the child. In such cases, peptonized milk, dextrinized gruels, broths, or gruels and broths combined, constitute the foods to be given.

## Paragraph 765

TEETHING (DENTITION).

The period of teething as a rule is a very important time in the care of the child, and causes more or less anxiety on the part of the mother.

#### Paragraph 766

SYMPTOMS OF TEETHING. When teething begins, the baby generally becomes fretful and peevish; puts its fingers in its mouth, and may have fever from one to two degrees; often very restless when asleep and frequently will cry out during its sleep. There is a continual drooling, and the saliva is sufficient to soil the dress or bib quite frequently. The gums are red and swollen.

#### Paragraph 767

APPEARANCE OF THE TEETH. The first set of teeth that a baby has consists of twenty. The first teeth to come through are the two lower front teeth, and they gradually appear from the fifth to the ninth months. Then come the four upper front teeth, which appear from the eighth to the twelfth months; next, one comes on each side of the two front, and at the same time there are two above and below a little farther back, leaving space for what is known as the stomach and eye teeth. The stomach and eye teeth appear from the eighteenth to the twenty-fourth months, and last, the second molars appear about the twenty-third to the twenty-fifth months.

#### Paragraph 768

TREATMENT OF TEETHING. When the first symptoms appear, it is a good idea to lessen the quantity of the diet. Cut down in the milk and cream, especially the milk. Give the baby the same quantity, but dilute it from one-fourth to one-half, as the severity of the case demands. If every precaution is taken in regard to baby's food, that is, being clean with nipples, bottles, etc., there is less danger of having trouble.

Here we might repeat that the milk should be perfectly fresh, and all utensils used in baby's feeding should be clean. Give the baby sips of cold water for the hot dry mouth. Gently rub the gums with your bare fingers. Give the baby an ivory ring, or other hard thing, to bite on, especially when there is evidence that the tooth is almost through; or take a towel and place one thickness over your first finger, then rub the baby's gum with this directly over the tooth. Use quite a little pressure. The gum may bleed a little, and the whole tooth will be seen. Do not rub all the tooth through. As soon as you have broken the surface of the gum, the tooth will gradually force its way through without any more help. Bottle-fed babies have more trouble and are slower in cutting their teeth than breast-fed babies.

If any serious complications develop while teething, such as vomiting, green stools, diarrhea or convulsions, the child should receive the attention of a physician, as diarrhea occurring in teething is as dangerous as at any other time. It must be remembered that teething rarely, if ever, causes any such serious conditions.

#### Paragraph 769

CARE OF THE TEETH: The daily care of the teeth is as important with children as it is with adults. A child should be taught early to use its tooth brush daily, and when any of the teeth in children begin to decay a dentist should be consulted, and they should have the proper care and attention. Teeth should not be allowed to decay in the mouth, and do not allow the decomposition of food which lodges in and about the spaces between the teeth. It is very important that the mouth and teeth should be kept perfectly clean, and every mother and nurse should strive to see that the children under their care have perfect teeth.

#### Paragraph 770

The teeth should be brushed up and down with a rolling motion of the brush. There are a great many preparations for cleaning and preserving the teeth, but a tooth brush faithfully used with salt

and water will accomplish all that can be desired. Many persons prefer a tooth cleanser in the shape of powder; others in the form of a cream, and there are many on the market. Probably one is about as good as the other. An excellent powder to preserve the gums, and prevent pyorrhoea from developing, is Pyorrhocide, and we recommend its use, but it is not so essential that any one kind of a tooth powder or paste be used. The success of keeping the teeth in perfect condition is the faithful daily use of the tooth brush.

Sometimes the narrow passages between the teeth cannot be reached with the tooth brush; in that case a dental floss will remove the particles of food lodged between the teeth. The dental floss is better than the use of a wooden tooth pick, because oftentimes it does not penetrate between the teeth. We believe that dental floss drawn between the teeth will do more to prevent decay and preserve the fillings you already have than anything else.

The teeth should be cleaned twice a day, especially in the evening. At that time a person can take sufficient time to use dental floss and give the teeth the necessary care.

The teeth should be examined once in six months by a dentist, but if the above suggestions are faithfully carried out there will be little filling to be done, and when it is necessary, the fillings will remain permanently by keeping the mouth and teeth perfectly clean and free from the decomposition that takes place by allowing food to remain in and about the teeth.

#### Paragraph 771

ERUPTION OF PERMANENT TEETH. The eruption of permanent teeth varies a great deal in different children. The teeth of the lower jaw are first, and the corresponding teeth above come later, even months after the corresponding ones below. Most everyone is familiar with the fact that the third molar teeth are delayed for some time; often not appearing until after the twenty-fifth year.

The following table gives about the average time:

		Age	•	F	Permanent Teeth.
6	yea	ırs		Four	first incisors.
7	yea	ars	• • • • • • • • • • • • • • • • • • • •	Four	central incisors.
8	уеа	ars		Four	lateral incisors.
9	to	10	years	Four	first bicuspids.
10	to	11	years	Four	second bicuspids.
11	to	13	years	Four	canines.
13	to	15	years	Four	second molars.
77	t.o	2.5	vears	Four	third molars.

### Paragraph 772

TOOTHACHE. When a child has toothache or decayed teeth, it is well to give a few doses of calomel; follow it with saline laxatives and apply heat to the face.

The child should be instructed early in life to use the tooth brush, and to keep the teeth perfectly clean. When any cavities are noticed, the dentist should be consulted so that they may receive the proper treatment. When there is a cavity, and you wish to treat the tooth, a little piece of cotton saturated with oil of cloves may be placed in the cavity. When the first set of teeth decay and cause trouble, they should be under the care of a dentist.

# Paragraph 773 GUM-BOILS.

When the root of a tooth becomes diseased, and we often find this in decayed teeth before the eruption of permanent teeth, inflammation causes abscesses to form in the gums. The face becomes badly swollen in such cases, and is very painful. At the beginning, if the gum is painted with tincture of iodine, it may prevent the formation of an abscess, care being taken not to use the iodine too freely.

Hot applications to the cheek, applying hotwater bottles, or any form of dry heat, will assist greatly in relieving the pain. When it is certain that the abscess is going to form, it should be lanced and not allow the pus to accumulate until the abscess ruptures of its own accord.

#### LECTURES OF INTEREST TO WOMEN

### Paragraph 774

#### FOREIGN BODIES IN THE EYE.

Quite often a small piece of cinder, or other minute sharp particle of some kind, will get into the eye, and sometimes the tears will wash it out, but it generally adheres firmly upon the under surface of the upper lid.

To look for the foreign body, first wash the hands, and then with the thumb and forefinger of the left hand, seize the eye lashes of the upper lid, and pull it away from the eye. Take a lead pencil or toothpick, and instruct the child to look down. At the same time, press the lead pencil or toothpick against the middle of the upper lid, and pull the lashes upward. This will invert the lid and the foreign body can generally be seen firmly adhered to the lid. With a cotton applicator, dipped in sterile water or boracic acid solution, gently remove the foreign body.

After it is removed, the irritation may persist for some time, and this is relieved by washing the eye out with boracic acid solution. If the eye is inflamed to any great extent, put a drop or two of a 20 per cent argyrol in the eye two or three times a day. Hot applications of boracic acid may be applied; this is done by using a piece of gauze wrung out of the solution and applied to the affected eye. It must be changed often, and should not be too heavy.

If the foreign body cannot be removed, or if it cannot be found, and the irritation continues, an eye specialist should be consulted.

NOTE. Sometimes with shop workers, or persons operating emery wheels, a piece of steel penetrates the eye-ball. In examining the eye, if nothing appears on the upper lid, look carefully and see if it can be seen embedded in the eye-ball itself. When an accident of this kind occurs, professional aid must be had at once, as there is great danger of injuring the covering of the eye-ball, forming an ulcer, which might result in serious after-effects.

#### Paragraph 775

FOREIGN BODIES IN THE EAR AND NOSE.

Children are in the habit of pushing buttons, beans, beads, peas, and similar objects into their ears and nose. If the object has been pushed very far into the nose or ear, it should be left for a physician to remove, but if it is impossible to secure a physician, a mother or nurse may endeavor to do something herself.

If it is in the ear, the child should be laid on the affected side, and the tip of the ear should be pulled outward and backward. This straightens the canal, and sometimes, if the object is not lodged too tight, it will drop out by itself. If it does not, syringing the ear with warm water may dislodge it; using an ordinary ear or fountain syringe.

To irrigate the ear, the patient should be seated; place a pus basin under the ear to catch the solution, and draw the ear outward and backward, as directed. Place the nozzle of the syringe at the upper part of the opening of the canal. This allows the water to get behind the object and wash it out. A mother or nurse should remember that a foreign body in the ear will not do any harm until the physician can be secured, as long as it is not giving any pain.

Sometimes insects crawl into the ear, causing much suffering. In that case, a little warm sweet oil, glycerin, or castor oil should be dropped in the ear, and the ear syringed with warm water, about a half or three-quarters of an hour after putting in the oil or glycerin.

When foreign objects are put in the nose, children often forget them, or they will not speak of it. They often cause inflammation and discharge. When discovered, if it is not too far in, or too firmly held by the swelling of the tissue, or by its own size, it may sometimes be removed by having the child blow its nose vigorously, or by irritating or tickling the nose with a feather, or by giving it a little snuff to cause it to sneeze. If this does not succeed, it is better not to make any attempt to remove it, because the child will cry

and any efforts will only have a tendency to force the object farther up into the nose. A physician should remove the object, because unskilled efforts to get it out would result in more or less injury.

## Paragraph 776

#### SWALLOWING FOREIGN BODIES.

Children often swallow objects like coins, marbles, buttons, etc.; occasionally safety pins. The former need cause no anxiety, and the safety pin, if closed, will generally pass without causing any trouble. In these cases never give any cathartic, but give the child a liberal meal of oatmeal mush, mashed potato, or bread. Aside from that, leave it absolutely alone. The bowel movements should be examined carefully every day for the foreign body.

If the child has swallowed an open safety pin, it may possibly pass without any interference if the round end is pointed in the right direction, but it should be watched daily with an X-ray, in order to note its correct position, and should the point of the pin penetrate the tissue, or the pin become lodged in any given point, a surgical operation would be necessary.

Sometimes pointed and angular articles, like fish-bones, jackstones, or a pin, may lodge in the throat, which causes the child to cough. If this occurs, stand the child on its head, suspended by the feet, and slap it on the back, in effort to dislodge the object.

Sometimes a foreign body can be grasped with the forefinger and thumb, but great caution should be exercised in attempting this. If it seems to have lodged in the lower part of the throat or in the passage to the stomach, it can be carried into the stomach by having the child swallow large mouthfuls of soft food.

In case a child swallows an open safety pin, or an object that lodges in the throat, and it cannot be removed, a physician must be called at once.

## Paragraph 777

HOW TO USE A FEVER THERMOMETER. Every mother should be acquainted with the normal temperature of a baby, in order that she may be able to appreciate the changes occurring in disease. There is no way to determine this except by the use of the clinical thermometer. It is impossible for us to tell if a child has fever by simply placing the hand upon its skin. Even the fact that the baby's hands and feet are cold is not sufficient proof that it is not having a high fever at the same time.

## Paragraph 778

The clinical thermometer should be in every household, and the mother should be taught how to use it correctly, and she should employ it whenever the child seems to be at all ill. She should also realize the fact that the degrees of fever which the thermometer may show is for the physician's information more than for her own. The instrument used is self-registering; that is, the column of mercury which indicates the temperature will remain at the highest point reached. It is made entirely of glass, and the Fahrenheit scale is engraved upon, or within, the tube, and divides it into degrees and tenths of a degree. The arrow on the tube merely points to what is considered normal—that is, 98.6 degrees. The normal mark is disregarded altogether in making the reading.

#### Paragraph 779

KIND OF INSTRUMENT TO USE. The best pattern to use is called the "One Minute Thermometer". It would be a mistake to depend on the full elevation being attained in just one minute; a somewhat longer time (two or three minutes) is usually required. Most of the instruments are made to magnify the column of mercury in order to make it easy to read.

## Paragraph 780

TAKING THE TEMPERATURE. The temperature may be taken under the arm, in the mouth, groin, or rectum. The groin does not give sufficiently accurate results. Temperature taken in the arm pits (under the arms) gives very poor results, and the

readings thus obtained are very misleading, on account of not being able to keep the surface of the skin close enough together to exclude the air. The thermometer may be placed in the mouth of children of five or six years of age, who can be trusted not to bite upon it.

When taking the child's temperature, it is safer to have it lie down. The end of the thermometer containing the mercury should be placed under the child's tongue, close its lips and hold the thermometer in place. Sometimes it is very difficult to close the lips and keep the thermometer under the tongue. If you instruct the child to "suck it like a stick of candy," that being an action with which every child seems familiar, it will help a great deal in keeping the thermometer in place.

## Paragraph 781

BY RECTUM. In infants and sick children, it is best to insert the thermometer in the rectum. In fact, it is best to take the temperature of all children and infants per rectum. It must be remembered that rectal temperature is about one degree higher than when taken in the mouth. To take rectal temperature, the child is laid on its back, or side, on the lap or bed, and the thighs flexed. The thermometer, bulb end, is oiled or vaselined, and is gently inserted about an inch into the rectum and left there for two or three minutes. The procedure is simple, painless, and free from danger, and the temperature reading will be accurate.

#### Paragraph 782

TIME. Temperatures are generally taken at 8, 12, 4 and 8 o'clock. Especially is this true where it is necessary to secure what is known as a 24 hour temperature curve. In some cases it may be necessary to take the temperature every hour, especially when giving medicine to reduce the fever. Each time the temperature is taken, record the reading; also make note of the time it was taken for future reference.

## Paragraph 783

CARE OF THE INSTRUMENT. After taking the temperature, the instrument should be held by its upper portion between the thumb and forefinger, and be swung or shaken forcibly until the column of mercury is made to descend in the tube far enough to bring the upper extremity of the mercury a degree or so below the normal mark. The thermometer should always be washed thoroughly with soap and cold water (never use hot water) after each time it is used, disinfect it with alcohol and place in its case. It is then ready for use at any time.

## Paragraph 784

THE TEMPERATURE CURVE. It is well to remember that the slightest kind of an irritation may cause an infant's temperature to rise and fall very quickly, and even a high temperature with an infant does not necessarily mean that there is any great danger existing. It is also well to remember that temperatures vary during the 24 hours. It is lowest in the morning, reaches its highest point in the afternoon, begins to sink again in the evening, and is at its lowest at midnight or the early morning hours. There may be a difference of one, two or three degrees between readings at different times of the day. In infants who are perfectly well, there is often quite a variation of temperature during the day, and it is not necessary to feel any uneasiness unless the temperature falls to 97 or 96 degrees, or rises to 100 degrees or more. Anything over 100 degrees is considered a fever.

## Paragraph 785

HOW TO GIVE A COLD BATH. A cold bath is given to reduce temperatures like in typhoid fevers, or where a child has a continued high fever. The bath tub should be large enough to hold the child at full length. Fill the tub half full of water at a temperature of 90 degrees, then add cold water or ice until the temperature is gradually reduced to 70 degrees.

The duration of the bath should be from three to five minutes. Watch the pulse carefully, and if

the slightest sign of weakness is noticed, or if the skin becomes blue, remove the child immediately from the bath and place it in bed with hot water bottles at its feet. Administer such stimulants as hot coffee or whiskey. It is often advisable, with children who have a weak pulse, to give the stimulant before the bath.

While the child is in the bath, continually rub the skin to stimulate the circulation. The bath should be repeated every three or four hours, or oftener if the temperature requires it. The temperature of the child should be taken before and after the bath, and when the bath does not modify or lower the temperature, the temperature of the bath should be lowered to such a degree that the desired result is obtained.

## Paragraph 786

## TEMPERATURES OF THE DIFFERENT BATHS:

Cold Bath	.Temperature	of	40	to	70	degrees	F.
Cool Bath	6 6	6 6	70	to	80	6 6	
Tepid Bath	6 6	6 6	80	to	90	6 6	
Graduated Bath	6 6	6 6	85	to	90		
Warm Bath	6 6	6 6	90	to	100	• 6	
Hot Bath	6 6	6 6	100	to	110	6 6	

#### Paragraph 787

## WHEN AN INFANT SHOULD NOT BE GIVEN A BATH.

- 1. A full tub bath should not be given until the umbilical cord has separated, and the naval completely healed.
- 2. An infant should not be bathed sooner than one hour after taking food. A full hour should also elapse between the bath and before giving the child its airing.
- 3. When the baby has a severe cough or cold it should not be given a bath without first consulting the family physician.
- 4. A bath should not be given if it causes the color of the skin to become bluish, or if the baby's hands and feet become cold.
- 5. If the skin seems to be tender, and chaps easily, you should not use soapy water. If the baby

has eczema on the face, edge of the hair, or in fact if any part of the skin is affected, those parts should not be bathed until a physician is consulted. Any tender skin should not be washed frequently with strong soapy water, as it causes severe chafing. In such cases all bathing should be temporarily discontinued.

### Paragraph 788

MUSTARD BATH. A mustard bath is of great value in infancy and childhood, in cases where a powerful stimulant is needed, or when a child is rapidly failing from any cause, and it is much better than a simple warm bath when it is desired to hasten or bring out the rash in any of the eruptive fevers.

To make a mustard bath, take 2 to 4 table-spoonfuls of ordinary mustard (not Coleman's) to a gallon of water. If Coleman's mustard is used, it only requires about half the amount just mentioned. A mustard bath is generally given at a temperature of from 90 to 100 degrees, or what is known as the "Warm bath."

#### Paragraph 789

HOT COMPRESS, or fomentation, is made of a piece of flannel folded three or four times into the form of a pad. This is placed in an open towel, dipped into boiling water, wrung out thoroughly by twisting the towel, removed from it, tested by the nurse against her cheek to ascertain that it is not too hot, applied to the part, and covered quickly with oiled silk and a folded dry towel, with or without a bandage. The fomentation should be renewed every half hour if we wish to keep up decided heat; or a hot water bottle, containing only a small amount of hot water, can be placed on the dry towel. Then the compress would not need to be changed so often. It is often very useful in relieving pain and controlling inflammation.

#### Paragraph 790

COLD COMPRESS. To apply a cold compress, which is often prescribed by a physician, and is good in many cases of acute inflammation of various kinds, take a thin cloth, such as a handkerchief, or a piece of

well worn sheet, fold it in three or four layers, wring

it out of cold water (ice-water if it can be obtained), and lay it on the affected parts.

The addition of one-third alcohol to the water has a tendency to increase its efficiency. It must be changed often (every 10 or 15 minutes) as it becomes warm very quickly, and is then of no value.

Where it can be arranged, and where the physician has ordered a continuous cold compress, take an ordinary fountain syringe, and fill it full of icewater, or cold water, tie a cord around the tube, and arrange it so that it will just drip, drop by drop, continuously on the cloth, then the cloth need not be changed.

Arrange a Kelly pad, or a rubber cloth, or ordinary oil-cloth, under the affected part, so that the water will drain into a vessel; this will prevent the child from getting wet. A rubber cloth or Kelly pad should be used regardless of whether you wring the cloths out of cold water and apply them often, or whether you use the drop method of keeping the cloth wet and cold. The ice-bag is often used in like manner, and for the same purpose.

#### Paragraph 791

HOW TO GIVE AN ICE PACK. The best way to give a child an ice pack is to place a rubber sheet on the bed, then a pad on that; a very large towel or a crib sheet should next be placed in lukewarm water wrung out and wrapped about the naked child, folding a part of it around each arm and leg; a piece of ice about as large as one's fist should then be gently ironed over the entire body, covering the places under the arms, and in the groins especially. An ice-cap should be at the head while this is being done, and if the feet are at all cold, a hot water bag should be placed there.

This may be kept up for ten or fifteen minutes if the child does not become blue; if he does, he should at once be removed from the pack, and heat applied while he is rubbed with a warm hand, and a little stimulant given. This blue appearance rarely takes place, however. After the ice rubbing the child may be left in the wet sheet for an hour

or so, then the temperature taken, and if it has dropped a little, or if the child seems more comfortable, the wet sheet may be removed and the nightdress slipped on with a light covering over it.

Paragraph 792

MUSTARD PLASTER, strictly speaking, is a poultice, as when used for children the mustard is added to flour or flaxseed meal, and the whole moistened and heated. One part of mustard should be mixed with three or four, or in the case of infants five, parts of flour or flaxseed meal. Boiling water is added, and the mixture stirred until it is of the proper softness. It is then spread on a cloth and applied directly (cloth side) to the skin. If it should burn too much, a layer of linen or some other thin material can be placed between. It should be kept on until the skin is well reddened, but not long enough to blister. After removing it, the skin should be wiped clean.

A plaster less likely to burn is prepared by mixing one tablespoonful of mustard, three or four of flour, the white of one egg, and a teaspoonful of glycerine. The prepared mustard plasters sold by druggists are usually too hot for use with children. They may be employed in emergencies, however, mitigating their strength by covering them with one or two layers of a wet pocket handkerchief or table napkin.

Paragraph 793
POULTICES.

A poultice is used when it is desired to retain heat, on any affected part, for the greatest length of time without frequent changing. It should not be too heavy or it will cause discomfort. Half inch or less is the right thickness, of course the thicker it is the longer it will stay warm.

Before applying a poultice the mother or nurse should test it against the cheek, always apply it slowly, lest it feels too hot to the child.

There are many kinds of poultices, the following are the most commonly used:

Paragraph 794

FLAXSEED POULTICE. One of the best-known

and most serviceable kind. Heat a sufficient quantity of water in a tin or china dish almost to boiling point. Add flaxseed meal slowly, stirring constantly and vigorously with a spoon until it is of the consistency of hot mush, too thick to flow. Spread this with a case-knife upon a piece of cotton or linen cloth; fold the edges over slightly, and cover it with an old pocket-handkerchief or piece of thin linen, cheese-cloth, or netting. Test to see that it is not too hot; apply, cover with oiled silk or paraffin paper, and bandage on. Renew every few hours. The addition of a little oil will keep it soft longer. Everything must be in readiness before the poultice is mixed, or it will grow cold, and the old poultice should not be removed until the new one is prepared.

SLIPPERY-ELM POULTICE. Prepared from ground slippery-elm bark in the same way as the flaxseed poultice.

#### Paragraph 795

BREAD - AND - MILK POULTICE. A popular and easily prepared poultice. Stale bread-crumbs are stirred into hot milk until the proper consistency is attained. It should be kept hot a few minutes to ensure the bread being well softened, then spread and applied. Water may be used instead of milk.

## Paragraph 796

BRAN POULTICE. When a flaxseed poultice would be too heavy, as in some cases of pain and tenderness in the abdomen, a bran poultice may be used. A flannel bag is partly filled with bran, thoroughly wet with boiling water, wrung out in a towel, and applied.

#### Paragraph 797

HOP POULTICE. Prepared and used exactly as the bran poultice, over which it has no particular advantage except that it is still lighter.

#### Paragraph 798

STARCH POULTICE. Thick boiled starch is spread warm on a cloth and applied directly to the skin without any covering between. It is used to lessen irritation in some affections of the skin.

# Paragraph 799 PLASTERS.

Plasters are used where counter irritants are needed, they should be applied as hot as the child can bear, watched carefully, so as not to blister the skin, and removed when the desired results are obtained.

## Paragraph 800

SPICE-PLASTER. This is a very serviceable application for infants with colic. It is composed of a mixture of spices which druggists combine in different ways. One formula consists of 1 part each of ground ginger, cloves, cinnamon and allspice, with or without 1/8 part of Cayenne-pepper, according to whether the plaster is to be strong or weak. Put the dry and well-mixed powder into a flannel bag, spread it evenly, and quilt the bag to prevent the spices from forming into lumps. Before applying, wet it with hot diluted alcohol or hot whiskey. The same spice-bag may be used repeatedly until it begins to lose its strength.

#### Paragraph 801

PEPPER-PLASTER. These old-fashioned but excellent preparations are of service in mild bronchitis or sore throat. Lard or still better, mutton-suet is spread evenly on a cloth and black or red pepper is dusted rather thickly over it, use less red than black pepper.

## Paragraph 802

NUTMEG-PLASTER. Prepared and used in the same way as the pepper plaster.

#### Paragraph 803

CAYENNE-PEPPER-PLASTER. Is made by taking one teaspoonful of Cayenne pepper to 15 or 20 tablespoonfuls of flour; make a thin paste and apply on a thin cloth, sift the pepper and flour several times in order to thoroughly mix them before adding the water.

#### Paragraph 804

COTTON JACKET. The cotton jacket is ordered by physicians in cases of pneumonia and other lung troubles in children. A waist of gauze, cheesecloth,

or other light weight of muslin, should be fitted to the chest, reaching high in front and back, and tying or pinning it over the shoulders in front, or down one side under the arm. To the inside of the waist, a thick layer of absorbent cotton is loosely attached by sewing it through and through in several places—quilting it on.

A cotton jacket retains the perspiration, keeping the skin moist and warm, and in that way assists in controlling inflammatory conditions of the lungs.

When a cotton jacket is used, hot camphorated oil, well rubbed in, is freely applied to the chest (both front and back) two or three times a day. Camphorated oil is a splendid remedy for acute lung troubles, and should be applied in connection with the cotton jacket. It will generally be ordered by the attending physician.

When it is necessary to remove the jacket, gradually remove it by cutting one or two inches off the bottom of the waist each evening. In that way it can be removed a small portion at a time without any danger of the child taking cold.

#### Paragraph 805

COLON IRRIGATION IN INFANTS AND CHILDREN.

WHEN GIVEN. This is given when a child has a temperature of 102 degrees and over, with frequent bowel movements associated with mucous-like passages; when the temperature is high, that is, 105 or 106 degrees; when there is intestinal infection (gastro-intestinal disorders) with a high fever and infrequent bowel movements; when there is a subnormal temperature and intense prostration. When a child has colic a good colon irrigation will often give relief, and occasionally when there is no movement without assistance, a colon irrigation may be given every six to eight hours, or once in twenty-four hours, as may be ordered by the physician. When it is only necessary to move the bowels an enema is all that is required.

#### Paragraph 806

SOLUTION USED. A normal salt solution is the kind of solution that is generally used, using a teaspoonful of salt to a pint of water, and sometimes

it is necessary to give it only half strength—the irrigation to be continued until the solution returns clear. One quart will generally be sufficient. The temperature of the solution should be 95 deg. F. When it is given during a subnormal temperature and intense prostration, the temperature should be about 110 degrees. Your physician will order the kind of a solution to use—the amount, temperature and frequency the irrigation should be given in any case of serious illness.

#### Paragraph 807

COLD SOLUTION. In cases where the fever is high, a cold solution will reduce the temperature to a marked degree. In this case the temperature of the solution should be as low as 70 degrees. In using a colon irrigation to reduce the temperature, use as much as four to six pints. Such an irrigation will often reduce the temperature two or three degrees.

#### Paragraph 808

HOW TO GIVE. To give a colon irrigation, take an ordinary fountain syringe with a small rectal tip, or if the tip is too large use a straight medicine dropper, and attach it to a soft rubber catheter. If you use the medicine dropper, put the large end into the tube of the fountain syringe and the small end into the catheter. Be careful, in selecting a soft rubber catheter, that the walls are sufficiently thick, so that the tube will not easily bend upon itself.

#### Paragraph 809

IF POSSIBLE, the catheter should be introduced into the rectum until it passes into the descending colon. In treating the average child it should be inserted into the bowel six to nine inches, and oftentimes gentle palpation over the left side of the abdomen will enable one to readily locate it. In infants it is not inserted as far as in older children.

#### Paragraph 810

THE INFANT should be placed on its back, with the buttocks slightly elevated by holding it by the feet. This will hold the buttocks close together, and the slight elevation will assist in allowing the solution to enter the large intestine, making the irrigation more effective. The bag should be held three feet above the child's body. The catheter, before it is inserted into the rectum, should be well lubricated with sweet oil, vaseline or glycerine, and the irrigation should be continued until the solution returns clear.

In cases where there is more or less depression, it will be beneficial if the child can absorb more or less of the solution; therefore, after it returns clear, it is a good idea to have the child retain as much of the clear solution as possible by placing the child on its left side with the buttocks elevated, and after a few ounces (three to five) has passed into the bowel, the tube should be quickly removed, and the child kept quiet for some time, with buttocks elevated.

## Paragraph 811

When it is necessary for the child to absorb the normal salt solution, it is often given by the Murphy drop method. When it is necessary just to move the bowels by giving an enema of normal salt solution, it can be done by simply using a glass funnel attached to a soft rubber catheter, and the catheter is inserted only a short distance into the rectum, and sufficient solution poured into the funnel in order to obtain the desired results. When giving an enema in this way, the child may be lying either on its back or side. If there is any preference, it should be lying on its left side.

## Paragraph 812

MURPHY DROP METHOD. In some cases of sickness the physician may recommend giving the saline solution or a sugar solution by the drop method. This is done when it is necessary for the child to absorb a large amount of the solution. To give the solution by the drop method, take a fountain syringe and attach a small rubber catheter, the same as if you were going to give a colon irrigation. Have the solution at body heat and keep it that temperature by placing a hot water bag, with a given temperature,

on the outside of the bag that contains the solution, then tie a string around the tube so that the solution will just drop out of the end of the catheter—say about 40 drops per minute—then insert the catheter into the rectum three or four inches and leave it there. The solution passing through the tube so slowly will cool very quickly, so it will be necessary to keep it quite warm in order that when it drops out of the catheter it will be the proper temperature. Test the temperature of the solution before the catheter is placed into the rectum by letting it drop upon the hand.

# Paragraph 813 ENEMA.

An enema is an injection of a certain kind of a solution into the rectum or bowels (the descending colon) for the purpose of securing a bowel movement, or to remove gas from the intestinal tract.

There are two kinds of enemas: low and high. For the low enema, the small rectal tip is used, and the solution only enters the lower bowel. For a high enema, the rectal tube, or soft rubber catheter, is passed up into the bowel eight to ten inches in older children, and from four to six inches in infants. Vaseline the tube or tip well before using.

The articles required to give an enema are a fountain syringe or douche can, small rectal tip, soft rubber catheter or child's rectal tube. When it is desired to give a high enema, the rectal tube, or catheter, is slipped over the rectal tip. When giving a low enema to infants, the common ''Infant Syringe'' is often used.

If possible, when giving an enema, have the child lying on its left side. Place the fountain syringe about four feet above the child. For ordinary use have the solution quite warm, but not hot. When a high enema is given to reduce fever, it should not be warm.

The solutions used for children are the soapsuds enema and the saline (normal salt solution);

the soapsuds for giving a low enema, and the saline for the high. Different kinds of solution are used and will be prescribed by the physician as needed for any given case. The mother or nurse should use only the soapsuds or saline, unless given special orders. The amount of solution used should correspond with the age of the child; using only what the child can retain with comfort.

An enema is given in various diseases and conditions; such as colic, convulsions, or any case where we have acute indigestion with persistent vomiting. A high enema should always be given at the beginning of any illness where there is vomiting and constipation. Low enemas are given for constipation, when it is desired to form a habit for the bowels to move at a regular time each day. It should be a standing order for the mother or nurse to give an enema in any case of sickness if the bowels do not move once in the twenty-four hours.

### Paragraph 814

BED WETTING OR INCONTINENCE OF URINE

When a child has had the proper training, and has reached the third year and cannot control the urine, it has what is known as 'Incontinence of Urine'. A child at this age should go from eight to nine hours without urinating at night, and from two to three hours during the day. When a child cannot do this, the case needs medical attention, unless it is simply a bad habit the child has acquired, whose training has been neglected, which is often the case. When it is not due to improper attention and training, it has many causes, some of which are very difficult to overcome.

## Paragraph 815

CHILDREN WHO ARE ANEMIC, boys who have not been circumcised, and girls who have inflammation of the vagina, worms, strongly acid urine, nervousness, adenoids and enlarged tonsils, all have a tendency to cause incontinence of urine, and should be considered when a child has this difficulty.

When a child has incontinence of urine, the bladder is completely empty, and it occurs more

frequently at night than during the day. The bed may not be wet only once, but several times. Often this condition lasts for months, or even years, and many times it is very difficult to cure. Rewards and kindness, with the proper care and right treatment, are more effectual than punishment in controlling this habit.

## Paragraph 816

TREATMENT: The treatment, of course, will depend upon the cause. The child should be examined by a physician, and if any of the above causes are found present, they should be corrected before you can expect to have any success in curing the habit. It is better that the case be under the supervision of your family physician. If incontinence occurs only at night, and the child controls itself during the day, give a dry supper; no liquids after five o'clock in the afternoon. At that time give a glass of milk; absolutely no fluid after that time until the next morning. Have the child empty its bladder just before it goes to bed; take it up at 10 or 11 o'clock and have it empty the bladder again. In this way, it is often able to hold the urine until 5 or 6 o'clock in the morning.

## Paragraph 817

Give a supper of some cereal with a little butter on it, toast or bread and butter, a little well stewed fruit with a cracker—no liquids.

Now if this treatment fails, let your physician prescribe a treatment for the individual case.

#### Paragraph 818

There is a granule made by the Abbott Alkaloidal Co., known as 'Incontinence Tablet'.

One granule is given every three or four hours, the last dose being given at bedtime. This granule is a good combination of drugs, and is a very good treatment after the causes have been removed. If the child should become flushed, a very bright red, while taking this granule, it should be stopped, or at least the dose diminished. The remedy-is generally given until results are obtained. It is a good idea to stop the medicine after giving it a few

days, and then begin again. No mother should attempt to prescribe drugs for her child, unless she is thoroughly familiar with the disease.

'Unlimited Patience' is the watch-word in treating this condition. It may be necessary to treat the case for a year or more before a child is entirely cured, and mothers must heartily co-operate with their physician, or else nothing can be accomplished.

## Paragraph 819

AMOUNT OF URINE. The amount of urine a child should pass is as follows:

Birth to 2 years 8	to	12	ounces
2 to 5 years15	to	25	ounces
5 to 10 years25	to	35	ounces
10 to 15 years35	to	40	ounces
Adult life		.52	ounces

#### Paragraph 820

TURPENTINE STUPE is made as follows: A piece of flannel is wrung out of hot water, as in preparing a hot compress, and then sprinkled evenly with turpentine, about a half a teaspoonful being used for each square foot of flannel. It is then applied, covered with oiled silk and a dry towel, and left on for a half to one hour, more or less depending on the degree of irritation it produces.

## Paragraph 821

#### HOLDING THE BREATH.

Holding the breath is a nervous disease, and occurs after great excitement, or in the act of swallowing. It occurs in infants as the result of fright or anger, and a child may often stop breathing until it becomes blue in the face and nearly unconscious. This affection is caused by a sudden spasmodic closing of the larynx. Sometimes no reason can be ascertained as to the cause of the child holding its breath. Generally speaking, it is not considered a serious condition, yet cases are recorded where they pass into convulsions and terminate in death from suffocation. When the attacks are frequent, and no fright or excitement can be noted

as to the cause, we suppose the child has rickets or some other constitutional disease.

TREATMENT. The treatment for children in the habit of holding their breath, to relieve the immediate attack, is to dash cold water from a glass into the face, or suddenly slap the face with a cold wet towel. This will produce a shock that will start the child breathing. Medicines which will act as a sedative on the nervous system may assist in controlling such a condition.

## Paragraph 822

## MOUTH BREATHING.

Mouth breathing is an indication that there is some obstruction in the throat or nose, due to enlarged tonsils, adenoids, or some other nasal obstruction. Children that breathe through the mouth continually for a long time, will develop a characteristic face expression, which will cause abnormal features and at the same time retard the mental development.

Snoring is very rarely a habit in infants and children. The infant who breathes with its mouth open should have it closed, and kept closed by applying a bandage under the chin and fasten it on the top of the head. When a child breathes through its mouth, or snores during its sleep, it is a condition that should not be neglected, because there is some obstruction which compels the child to breathe in this abnormal manner.

In mouth breathing, every mother should realize the importance of not neglecting the case, but have it attended to at once, as no child should be allowed to develop the habit of mouth breathing. A child is never too young but what it can have temporary relief, and be operated on later for permanent relief. In young children, adenoids may return after they have been removed. In older children there is less danger of them recurring, but if they do, they should be removed, because if left until later in life, they may do a great deal of permanent harm.

# Paragraph 823 HICCOUGH.

Hiccoughs are caused by some intestinal trouble; either the accumulation of gas in the stomach and bowels, or overloading the stomach with food, which causes a spasmodic contraction of the diaphragm. It is usually of little consequence, but if an attack is prolonged, an enema of soap water and a laxative of milk of magnesia should be given; or a Carminzym tablet (this for a child five years old) will generally give relief.

When hiccoughs occur in any case of serious illness, it is looked upon as a grave symptom. Hysterical children that have been subject to unusual excitement will have hiccoughs to an alarming degree. In such cases, a dose of the triple bromides, according to age, which may be repeated from fifteen to twenty minutes, will usually control the spasms.

In infants, a quick change of position, or a little drink of hot water, in which has been placed a little soda mint, will often give relief. In older children, often drinking a glass of water, causing the child to laugh, or hold its breath for a few seconds, has proven effective in relieving hiccoughs. Any or all of the above treatments can be given, as the severity of the case demands.

# Paragraph 824 SQUARE DIAPER.

Square diapers are used by some, and are very satisfactory when properly applied. They fit loosely and do not irritate the genitals as much as the pointed diaper.

It is applied by taking an ordinary diaper and folding it once. The folded edge is placed upwards, and pinned around the infant's thighs; then one side of the loose edge under the leg is pinned to the edge on the outside. Both sides are pinned the same; one or more pins are used as needed.

In applying the square diaper, as well as any other kind, care should be taken that it is not

too bulky between the thighs, as it has a tendency to keep the thighs apart and cause bow-legs. Great care should be used at all times not to have any kind of a diaper put on too tight.

## Paragraph 825

#### SUCKING THE THUMB.

A great many children develop the habit of sucking the thumb. It may not do any great amount of harm, yet there is nothing gained by the practice, and it should not be allowed. When a child sucks its thumb only when it is sick, or to quiet the nervous system when it wants to go to sleep, the trouble will generally correct itself, or it is very easily cured. In cases where the habit persists continually, and the child sucks its thumb whether awake or asleep, it demands active treatment. Such a habit may result in deformity of the upper jaw, causing it to become angular in shape. The lower jaw becomes depressed, and this condition causes the upper teeth to grow forward.

#### Paragraph 826

TREATMENT. When a mother or nurse notices that the habit is being formed, gently remove the thumb, and direct the child's attention along other lines. If the habit becomes established, bitter or disagreeable substance placed on the thumb will sometimes effect a cure (such as the infusion of quassia), but in bad cases all local treatment will be of no avail. The thumb must be forcibly kept out of the mouth. This may be done by placing the child's hands in the metallic "Hand-I-Hold" mits. They are metal mittens that slip over the hand, and the cuff is pinned to the neck of the dress or to the child's sleeve during the day. The child's hands must either be placed in metallic mittens, or they must be pinned in the sleeves so that it is impossible to get the thumb in the mouth.

The "Elbow Cuff" is also another very effective way to cure thumb sucking. It is made by taking a piece of pasteboard, making a cuff and slipping it on the arm, and pinning it so that the center of the cuff is about even with the elbow. It should extend about halfway up to the shoulder, and

down almost to the wrist. This prevents the elbow from bending, and the child cannot get the thumb in its mouth, yet at the same time has free use of the hand and arm. Persistence in continual treatment, extending over a period of months, may be necessary in some cases to effect a cure.

## Paragraph 827

BITING THE FINGER NAILS.

This habit is very common in children and often continues in adult life, ruining the shape of the fingers. The cause is due to some nervous condition.

## Paragraph 828

TREATMENT. The treatment consists of relieving any nervous excitement, and improving the hygienic surroundings. If this cannot be relieved, the best way is to keep the finger nails forcibly out of the mouth by using the ''Hand-I-Hold'' metallic mittens, or applying infusion of quassia on the fingers (the same as used for thumb sucking), or using the ''Elbow Cuff.''

## Paragraph 829

NORMAL SIZE OF THE HEAD AND CHEST. The following is the size of the baby's head and chest:

		Head		Chest
Birth	13½	inches	13	inches
Six months	17	6 6	16½	6 6
One Year	181/4	٠ 6	18	6 6
Two Years	19	6 6	18½	* * .
Three Years	19½	b b	20	6 6
Five Years	21		22	b b
Adult life	21½	6 6	30	6 6

## Paragraph 830

NUMBER OF PULSE BEATS. The number of child's pulse beats per minute is a follows:

b parbe beach per minate ib a forte	W D .
At birth130 to	150
First month120 to	140
1 to 6 monthsabout	130
1 to 2 years110 to	120
2 to 4 years 90 to	110
6 to 10 years90 to	100
10 to 14 years 80 to	90
Adult life	72

This table gives the pulse rate in children who are awake and perfectly quiet. The figures are even more approximate than in the case of respirations, owing to the great tendency to irregularity referred to, and to the extreme difficulty experienced in finding the quiet state desired. For this reason the best time to count the pulse is when the child is asleep. We must remember, however, that sleep produces a decided decrease in speed. In children under 9 years of age, the decrease is 16 to 20 beats per minute; from 9 to 12 years, it is about 8 beats, and from 12 to 15 years, 2 beats. The rapidity of the pulse is slightly greater in girls than in boys of equal age, but the difference is not very material.

## Paragraph 831

NUMBER OF RESPIRATIONS. The number of a child's respirations per minute is as follows:

At birth, and for the first two or three weeks, 30 to 50, average about 40.

During the rest of the first year, 25 to 35, average about 30.

1 to 2 years, about 28.

2 to 4 years, about 25.

Adult life, 16 to 18.

All these rates are from one-fifth to one-quarter less when the child is asleep, at least up to the age of four years, although after this the breathing is still slightly slower during sleep. The numbers given are average and approximate ones only, for the rates vary considerably in young children. To estimate the frequency of the breathing, we may watch the in-and-out movements of the abdomen, or perhaps put the hand lightly on the abdomen and feel them. It is necessary to avoid the slightest excitement, since this increases the rapidity very greatly. During sleep is an excellent time for making the observation, allowing for the differences mentioned.

## Paragraph 832

CORRECT DOSE. To know the correct dose of medicine to be given to children according to its

age, Dr. Young's rule is a good one. It is as follows: Add 12 to the child's age and divide the result by the age of the child; that is, if a child is 4 years old add 12 to 4, which would be 16; then divide 16 by 4, which would be 4, or ¼; that is, a child 4 years old would be given ¼ as much as an adult. This is for the ordinary drugs. Those that have a poisonous or toxic effect must be given in still smaller doses, and only as prescribed by the physician. The following is a table of proportionate dosage at different ages:

Adultl					
18 years3/4 or	1				
12 years1/2					
8 to 10 years2/5					
6 years1/3					
4 years1/4					
3 years1/5					
2 years1/7					
l years1/10					
9 months1/15	2/3	dose	of	1	year
6 months1/20	1/2	dose	of	1	year
Birth to 3 months1/30	1/3	dose	of	1	year

# Paragraph 833 AVERAGE DOSE.

The following is the scale of doses employed at Guy's Hospital, London, one being the unit or adult dose:

AGE	DOSE	AGE—	DOSE
1 month	1/20	7 and 8 years	1/2
3 months	1/15	10 and 12 years	2/3
6 months	1/10	13 and 15 years	3/4
9 months	1/9	18 to 20 years	5/6
l year	1/8	21 to 45 years	1
2 years	1/7	50 years	5/6
3 years	1/5	60 to 70 years	3/4
4 years	1/4	80 to 90 years	2/3
5 and 6 years	1/3	100 years	1/2

# Paragraph 834 SNAKE BITES.

To be effective, treatment must be given immediately. Tie two tight bands, one above the other,

the same as directed for mad dog bites. Take a knife and open up the wound freely in several different places, and thoroughly suck out the poison. To do this, the lips should be free from any sores or cracks. Give whiskey in large quantities, or any other strong stimulant.

The local treatment for such cases is to excise the wound, or cauterize it with a hot iron. If possible, secure medical aid. The bands may be left on for a few minutes and re-applied. The wound should be washed with an antiseptic solution, such as alcohol, bichloride 1-1000, or permanganate of potash, 20 grains to the ounce.

## Paragraph 835

CAT, DOG OR HORSE BITES.

Children are often bitten by animals in play, and oftentimes when the animal is cross. When the skin is broken the parts should be thoroughly disinfected at once. The wound should be washed off thoroughly with bichloride solution (1-2000), then with a lysol solution (1-400); next wash the parts off thoroughly with plain boiled water, and lastly apply a turpentine dressing; that is, pour turpentine on the parts and wrap them up in gauze which has been slightly moistened with turpentine, and put the dressing in place, not too tight, or it will blister. In place of the turpentine, you may use alcohol. Such bites are not serious unless the animal is mad, or the wound becomes infected.

When a child is bitten by a mad dog on the hand, forearm, foot or leg, the thing to do is to act quickly, and prevent the poison from entering the system. This is done by tying a strap, cord, rope or handkerchief, or anything that will make a tourniquet, and tie it tightly, to control the circulation of the blood, practically stopping it. If the bite is on the hand, bind the cord tightly around the hand just above the wrist; if on the forearm, then tie it tightly around the arm just below the arm pit; if the bite has occurred on the foot, or leg below the knee, tie the band tightly just above the knee; if the bite has been just above the knee, tie the band tightly around the thigh.

## Paragraph 836

In the treatment of a mad dog bite, the band must be placed as quickly and tightly as possible. One or two bands can be tied (one above the other), as two would be more successful than one. Leave these bands or bandages on for an hour, release them for a few minutes, and renew again if necessary. Treat the wound locally by swabbing it out with full strength carbolic acid or iodine, then apply a piece of gauze saturated with pure alcohol. Make all haste to get the patient within reach of the proper medical assistance.

If it is suspected that the dog is mad, it should be confined in a safe place for four or five weeks to see if it develops hydrophobia.

# Paragraph 837 MOSQUITO BITES.

Mosquitoes are a source of great annoyance to infants and children, and the little pests must be kept away. They often carry infection. Windows and doors should be screened, and mosquito-bar should be so arranged over the baby's bed that it will keep the mosquitoes out.

The itching is best controlled by ammonia, or spirits of camphor. Dampened salt on the spot is sometimes useful; also Calvert's carbolized oil, which is made by using a half a teaspoonful of pure carbolic acid and two ounces of the finest olive oil. This preparation should be marked "Poison." It can be applied to the parts bitten by mosquitoes.

# Paragraph 838 INSECT STINGS.

Insect stings from bees, etc., are seldom dangerous, yet quite painful. The parts should first be washed with alcohol, and if the sting of the insect is present, it should be removed.

Ammonia water and spirits of camphor is applied, after which a poultice of antiphlogistine is useful.

## Paragraph 839 MUSCULAR CRAMPS.

Cramps in the muscles occur mostly in adults, and generally come in the calf of the leg. They are

prone to appear at night, and are often very annoying and painful. At times, the frequency of recurrence of these cramps are of such a painful character as to seriously interfere with sleep. They occur in various conditions, like diseases of the kidneys and pregnancy.

In children, we get more or less twitching of the muscles in acute intestinal infection. When cramps occur they should be massaged vigorously. The patient can press the toe against the foot of the bed; or stand on the floor and rest the weight partially on the ball of the foot of the affected leg. This will generally relax the muscles and relieve the crampy condition. If it should occur in children, grasp the foot and toes and press toward the body; at the same time massaging the contracted or twitching muscles. As a general rule, the cramp lasts only a short time, but often leaves the muscles sore and tender for ten or twelve hours.

## Paragraph 840

#### BURNS IN CHILDREN.

Children get burned very frequently in various ways, which produce very slight or very serious conditions. The usual causes are hot water, steam, acids, or some of the alkalies. Burns are classified into first, second and third degree, according to the severity of the burn. Some cases cause fever and rapid pulse. Burns always cause more or less pain and shock. It all depends upon the amount of surface involved, the condition of the child, and the degree of the burn. Burns of any magnitude should be considered seriously on account of the risk of infection and degree of shock.

#### Paragraph 841

There are three preparations, one of which every mother should have on hand to use in a case of emergency until the physician arrives. The first one is equal parts of linseed oil and lime-water. Apply this freely on a cloth. Another preparation is an ointment known as Unguentine. This should be applied in sufficient amount to exclude the air, and a light bandage put on. The other is an ointment

of one per cent picric acid, applied the same as the Unguentine. The picric acid can be used in a one per cent solution in the same way as the linseed oil and lime-water is used.

# Paragraph 842 NOSE-BLEED.

Nose-bleed is controlled by placing the hand and forearm over the top of the head on the side that the hemorrhage occurs, then press firmly along the side of the nose (the same side that is bleeding). This will often control the bleeding in a very short time. The arm over the head decreases the blood pressure on the nose, and the pressure on the nose will act locally to control the hemorrhage.

If this fails give the child a mustard foot bath. Syringe the nose out with a solution of tannic acid—dissolve 2 teaspoonfuls of tannic acid in 2 ounces of water, and add 1 teaspoonful of glycerine. If this is not effective, apply adrenalin solution (using 1-1000), 1 dram and 2 drams of boracic acid solution or sterile water; drop from 3 to 5 drops in the nostril, or it may be applied on a cotton applicator. Be sure the cotton is well wrapped on the applicator, so it will not remain in the nostril when the applicator is removed. This may be repeated in five or ten minutes if necessary. Be careful and never blow the nose during the bleeding, and for some time afterwards.

# Paragraph 843 WARTS.

Warts are very common in children, generally appearing on the hands. They develop quite rapidly and disappear in the same manner without any treatment whatever. There is a belief that they are destroyed by various charms, but we have no real evidence that any such procedure will cause their disappearance.

TREATMENT. The most scientific treatment for the removal of warts is to destroy the fungus growth with the application of electricity, applied in the form of the high frequency current. It requires special electrode, which produces a single spark.

After the wart has been treated several times with the electrical spark, it turns black, then it is curetted out and the wound soon heals, leaving the skin perfectly smooth and clean.

While the mother will not be able to apply this treatment, the services of a physician familiar with such work can always be secured.

# Paragraph 844 SUNBURN.

When the skin becomes irritated from the sun rays, it becomes red and tender, often swollen and blistered, and when exposed to the sun it will cause much discomfort. The ordinary sunburn causes very little trouble. Fresh air and sunlight are to be recommended rather than discouraged, as regards discoloration of the skin.

TREATMENT. The treatment of sunburn, when it is severe, is the application of a soothing ointment, and one of the best is oxide of zinc ointment. This can be purchased from the druggist in tubes, and should be applied freely.

# Paragraph 845 FRECKLES.

Freckles are caused generally from the sun rays. People with light complexion, like blondes, or red-haired persons with delicate skin, are very susceptible to freckles. They occur most frequently after the third year and until puberty. When they do develop, they generally disappear after that time. Children who have skin, on which freckles develop easily, could possibly prevent them by not exposing themselves to the sun, but this is not to be recommended, as it would injure their health. It is only a question of time when freckles will disappear of their own accord. The girl should shade her face, and protect it from the intense sun rays, by wearing a broad brimmed hat.

TREATMENT. The best treatment for freckles is some soothing preparation, and the treatment is effective to a more or less degree. It is not advisable to use, indiscriminately, the various applications sold in the shops for such conditions.

The safest preparation is a benzoine compound, which is made by taking the tincture of benzoine, l teaspoonful; glycerine, half a teaspoonful; rose water, enough to make three ounces. Apply this locally three or four times a day.

## Paragraph 846

#### BIRTH-MARKS.

Birth-marks often occur in the form of moles and naevi. The latter is the technical name for the reddened or purple circumscribed area on the skin. Sometimes this reddened condition is on a level with the skin; other times it is elevated. It is generally very small, but sometimes it is very extensive. When an excessive growth develops, which is very rare, it may prove a dangerous condition, but generally speaking, it receives no attention, and is of no consequence, only the unsightly disfiguration which it produces.

Birth-marks are not caused by any impressions made upon the mind of the mother during pregnancy, and they rarely need any treatment. It may be necessary to remove some on account of the looks; this will need an operation; others cannot be removed at all.

Moles are of frequent occurrence. This is an elevated part of the skin, and often dark in color. Sometimes they are flat; they may be smooth or they may be covered with hair. They vary in size; being very small, or of sufficient size to cause more or less disfigurement. When moles are located on the face, they can be removed by surgical operation.

## Paragraph 847

#### TONGUE-TIE.

When this condition exists, there is a membrane in the middle of the tongue, extending so far forward on the tongue that it holds it back in the mouth, which interferes with the free action of the tongue and nursing. The frenum, or membrance, is divided by clipping it with a blunt-pointed scissors, which is done by a physician.

In order to prepare the child, wrap it in a large towel, binding its arms to its sides. It is placed on its back in the mother's or nurse's lap, or better still, on the table. The head should be supported by the nurse, and the child held by an assistant, which will leave the physician with both hands free for the operation.

The instruments that you will need to sterilize for this operation are a pair of blunt-pointed scissors and a grooved director. The broad end of the grooved director is placed under the infant's tongue. The membrane is fixed in the slit of the grooved director. This raises the tongue and keeps it out of the way, and puts the membrane to be cut on a tension. The cutting of the membrane is a simple matter, and the bleeding is so slight that it need not be considered.

## Paragraph 848 HARE-LIP.

Fortunately, such a condition as hare-lip is not very common, but when the lip does not unite properly, and forms a division, it requires an operation. Surgeons differ as to the proper time to operate. As a rule, these cases are not operated on until after the child is two years old. During the hot summer months is not a good time to operate on young infants, as it requires more effort at this time to overcome the shock of the operation, and there is also more danger of stomach and bowel complications if the weather is hot.

Giving the child sufficient nourishment until conditions are favorable, is not to be dreaded, because we have ample facilities for feeding a child with hare-lip. This is accomplished by using forced feeding, or gavage, which is fully explained elsewhere. See 'Forced Feeding.'

A condition often associated with hare-lip is a cleft palate, which is an opening through the palate; the mouth and nose forming one cavity. It interferes with nursing, and makes it impossible by taking away the power of suction. Such a case must be fed from a spoon, or by forced feeding. There is a specially made nipple, in which there is a

thin rubber flap, or plate, made to act as a false palate, and closes the unnatural opening during the nursing. This is used until after the nursing period, or until the case is ready for operation.

# Paragraph 849 NIGHT TERRORS.

We often find night terrors in children from two to six years old, who have some derangement of digestion or nervous temperament, and oftentimes the evening meal, previous to the attack. was far beyond the digestive capacity of the child. Sometimes overwork at school will cause night terrors; also over-excitement of any kind; such as, birthday parties, Christmas nights, heavy meals in the evening. Often children suffering with adenoids, enlarged tonsils, or pinworms, are subject to night terrors.

They come on suddenly during the sleeping hours. The child screams and is overcome with fright, stands up in bed, and often runs from the room, does not seem thoroughly conscious, fails to recognize its parents, and often cannot be pacified. They generally come on about two or three hours after the first sleep and last but a short time. Usually only one attack occurs during the night. It generally occurs at irregular intervals, depending upon when the child was excited or overfed.

## Paragraph 850

NURSING TREATMENT. A child suffering with terrors should have its diet carefully guarded. It should have its dinner at noon, and the evening meal should be very light; consisting of a little stewed fruit, milk, toast and butter, and some kind of cereal. The child should never be allowed to go to bed unless the bowels have moved freely at least once during the previous twenty-four hours. School duties should be lessened, and excitement of any kind should be forbidden.

# Paragraph 851 HEADACHE.

In the treatment of headaches, that are generally caused from some derangement of the stomach,

it is best to give a dose of saline laxative or a bottle of citrate of magnesia. In two or three hours after taking the laxative, give a saline enema, and see that the alimentary canal is thoroughly emptied. Take but very little nourishment, mostly liquids, and take the migraine tablets as directed--one every fifteen to thirty minutes for adults, and for children 12 years of age one every two or three hours until relieved. You may give a child one every hour for a dose or two. Cold or hot applications applied to the head, with a hot mustard foot bath will be found very good treatment for headaches.

# Paragraph 852 EARACHE.

Inflammation and discharge from the ear is very common in children, causing earache and pains in the ear. They are diseased conditions affecting the middle ear, and abscesses form in the mastoid cells back of the ear, which require the attention of a specialist. But nine times out of ten, earache in children is due to neglected colds. The pain may come on suddenly (often in the night) with no distinct symptoms present.

When a child has earache, and at the same time there is a discharge from the nose, we have reason to believe the ear is inflamed. A child a year of age or over will put its hand to its ear; small infants merely cry loudly and almost continuously. The pain may continue for a few hours or days.

## Paragraph 853

NURSING TREATMENT: You will give the child great relief by gently syringing the ear out with warm boracic acid solution. The child should be placed on the infected side, with the head downward over a basin and, with the ear syringe, the solution should be gently forced into the canal, but do not place the syringe too far into the ear so as to obstruct it.

The ear should be dried with a cotton applicator. Extreme care should be taken not to injure the ear drum. Do not insert the applicator too

far. When the ear is dry, put in a drop or two of warm glycerine; close the canal with a little cotton.

When pus forms behind the ear drum, rupture of the drum will follow; this will give relief and the pus will escape from the ear. This often occurs before the condition is detected by the mother, nurse or physician. The canal should be thoroughly cleaned out with boracic acid solution, using the ear syringe; avoid using force. The canal should be dried and the outer ear lightly packed with cotton.

In place of using the boracic acid solution, the ear may be irrigated with a 1-10,000 bichloride solution, using an ordinary fountain syringe with a straight medicine dropper attached. A large amount of hot solution can be used in this way (a quart or more), and when there is much discharge it is the best treatment. When irrigating the ear in this way, the child may be sitting up, and place a basin under the ear to catch the solution. Never use any kind of powder in the ear.

Sometimes there may be an accumulation of wax in the ear, which should be removed, and the best thing to soften up the wax, so that it can be washed out with boracic acid solution, or wiped out with small cotton applicators, is to put into the ear, with a medicine dropper, a drop or two of warm glycerine.

Any further treatment, than the above mentioned, should not be attempted by the mother or nurse. Do not get into the habit of placing different medicines in the ear to stop the earache. Hot applications and washing out the ear with warm boracic acid solution, removing the wax with glycerine, and irrigating the ear with bichloride solution, should be all that any mother and nurse should do without the advice of a physician.

When the earache continues, and the child has a temperature, and the above treatment fails to give relief, pus may be forming, and the ear drum may need lancing. See the specialist.

# Paragraph 854 RINGWORM.

Ringworm is a contagious skin affection, which occurs mostly in childhood. It occurs on the face or any part of the body, but only found on the scalp in childhood. It consists of a single, dull-red, more or less circular spot, which gradually enlarges in size until the center becomes almost natural in color and appearance, and leaves an inflamed ring around the edge. When ringworm occurs on the scalp, the patches are more numerous, circular, but not very red. The hair often comes out in the center of the ring, leaving the spot bald.

In a case of ringworm, a child should be practically isolated until it is cured. It is a mother's duty to see that the child does not come in contact with other children, thus preventing them from catching it. A child must not attend school, and all its toilet articles must be kept strictly for its own use.

## Paragraph 855

TREATMENT. Paint the affected parts once a day with iodine; or a sulphur and tar ointment, 25 per cent each, well rubbed into the affected parts two or three times a day, for a week or longer, will often effect a cure. Yet the treatment of ringworm, especially in the scalp, is very difficult, and the wise mother or nurse will not undertake to care for a case herself, and the sooner the skin specialist is consulted, the greater the chance of getting it under control.

## Paragraph 856

#### LICE.

Lice occur in all classes, and they are contracted from some accidental contact with a person infected, and when they are discovered in the scalp, the first symptom is a severe itching. The lice themselves must be removed, and the nits destroyed.

#### Paragraph 857

TREATMENT. The best way to destroy the nits and remove the lice is to apply kerosene to the scalp and thoroughly wash the scalp with tar soap to remove the kerosene. Between the applications of the

kerosene, which should be every other day, the hair should be washed with vinegar in order to destroy the nits. With this kind of treatment, long hair need not be cut off. One of the best ointments to use is made from larkspur seed. A 50 per cent ointment is generally used, and is rubbed on the scalp several days in succession. This ointment is very effective, killing both the lice and the nits.

## Paragraph 858

ITCH.

Itch, the same as lice, may affect the individual, as it is transmitted by personal contact. It consists of small pimples, and may occur on any part of the body. The itching sometimes is very intense, and the skin is actually torn by scratching. The itch may be contracted from bed linen or clothing, and special attention must be given to disinfecting the clothing and bedding.

## Paragraph 859

TREATMENT. The treatment consists of giving a bath with liquid green soap, and applying freely a 50 per cent sulphur ointment night and morning. The green soap bath should be given once or twice a week.

# Paragraph 860 BOILS.

Boils are very common, and are very painful. Within a circumscribed area, the skin becomes elevated, red, tender, and swollen, which part becomes filled with pus. Boils are generally associated with some unfavorable hygienic conditions, or some impaired condition of the health, which may be general, or a local disturbance.

#### Paragraph 861

TREATMENT. The best preventive treatment (to prevent a boil from forming) is: when the first pimple develops, which gives evidence of the formation of a boil, apply a piece of gauze to the inflamed part, well vaselined on the side placed next to the skin, and make the gauze quite moist with chloroform. Add a little chloroform from time to time to keep the gauze moist. If this treatment is

properly applied, it will often abort a boil or carbuncle. Care must be taken that too much chloroform does not come in contact with the skin that is unprotected with vaselined gauze, as it may cause a blister.

If chloroform does not stop the infection, and it goes on to the formation of a boil, then the best treatment is to apply a saturated solution of Epsom salts. This is done by wringing out a piece of gauze in a hot solution of the salts and placing it to the parts. Wring out a Turkish towel in plain hot water and apply it over the gauze, and on top of the towel place a hot water bottle, but do not have the water sufficiently hot to burn the skin. It should be washed off carefully with pure alcohol, so as to render the parts thoroughly aseptic. In a great many cases it is necessary to have the boil lanced, and in such cases it will be necessary to consult a physician.

## Paragraph 862 DANDRUFF.

Unless a great deal of care is given to the scalp, young infants will often develop an excessive production of dandruff, and scales form on the scalp. This should not be allowed to form, and may be prevented, as recommended by Griffith, by applying a 10 per cent boric-acid ointment daily to the scalp with a moderate amount of friction. This will check the excess of oily secretion. When large yellow patches form, they should be removed by soaking with sterile warm olive oil; then wash it with pure Castile soap and warm water. Dry the parts thoroughly and apply the boric-acid ointment twice a day. Never use a fine tooth comb to remove crusts or yellow patches.

## Paragraph 863

INTESTINAL WORMS IN CHILDREN.

There are three kinds of intestinal worms that occur in children: the round worm, the pinworm, and the tapeworm, and they probably occur in frequency as mentioned. Worms produce very indefinite or no symptoms, and a great majority of mothers think their children have worms when they

are not suffering from them at all, but have some diseased condition of the digestive organs.

Merely because a child has a loss of appetite, grinds its teeth at night, is restless, picks its nose, or has dark circles under the eyes, is no reason why a child should be dosed with various kinds of vermifuge or 'Worm Medicines' that are on the market, because abnormal digestive conditions will produce identically the same symptoms.

Just how the pinworms and round worms are acquired is not proven with absolute certainty. The tapeworm enters the body in food containing the eggs or ovum, such as pork, beef and fish. We will consider the three kinds of worms in their order of frequency as they occur in children.

## Paragraph 864

ROUND WORM. The round worm is reddish or yellowish in color, and is usually from five to ten inches long. The male worm is smaller than the female. They are found in the small intestines and always in numbers, probably from half a dozen to a dozen in each case. Some authors state that from 200 to 300 have been found at one time. This worm is usually found in children between the second and tenth years. It is never found in nursing children.

They sometimes get into the stomach from the small intestines, and cause sufficient irritation of the stomach to produce vomiting, and the worms are often expelled with the contents of the stomach. They have wonderful wandering facilities and may enter into various parts and cavities of the body, such as the vermiform appendix, gall bladder, throat, trachea (wind pipe), stomach, middle ear, or nose. The round worm causes restlessness at night, grinding of the teeth, picking at the nose, colic, or diarrhea. The nervous system is irritated sometimes to the extent that convulsions will occur.

It is important to remember that these signs and symptoms do not always mean worms. The diagnostic proof is to find the worms in the stool, and when they are present some of them will invariably be passed. To make a positive diagnosis, the ovum must be discovered in the stool by a microscopic

examination, which is very necessary, and should always be made when the child has symptoms as mentioned above, and you suspect it has worms.

## Paragraph 865

PINWORMS. Pinworms are much different from the round worms. They look like a short piece of white thread and are from one-third to one-half inches long. They taper towards the tail. The female is a thin yellowish white worm and has a pointed tail. The male has a strongly curvel tail. They inhabit the lower part of the bowel in and around the rectum, and sometimes they wander into the vagina.

They are usually found in large numbers, and are very irritating to the mucous membrane of the bowel, causing catarrhal conditions. They cause intense itching of the rectum, which is always worse at night after the child becomes warm in bed. It seems as though the worms are most active at this time. The intense itching caused by the pinworms about the anus and adjoining parts is one cause of the bad habit of masturbation. The nervous system is irritated to some extent but not as severe as that caused by the round worms.

To remove the pinworms, first thoroughly cleanse the bowels out with a copious injection of warm water, then inject an infusion of quassia. This infusion is made by taking quassia chips and steep them the same as making tea. After straining out the sediment, use the solution as an enema, and let it remain in the rectum as long as possible, using just a sufficient amount (2 to 4 ounces) so that the bowels will retain it for some time. Do not use enough to distend the bowels so that it will be expelled immediately. After the quassia enema has been retained for half an hour give a large enema of the quassia solution and have the entire amount expelled.

#### Paragraph 866

TAPEWORM. A tapeworm does not occur as frequently in children as it does in adults, and the form that occurs most frequently is the one found in

beef. The tapeworm develops in about three months, when the large segments separate and are discharged in the stool. Each segment contains both male and female organs, therefore each segment is capable of producing a whole worm, and for this reason the treatment will be unsuccessful unless the head and all other segments have been expelled.

Tapeworms live a long life—from 10 to 20 years, and some say as long as 30 years. The length of a tapeworm varies from 10 to 15 feet. When children have a tapeworm, they have more or less nervous trouble, are restless, breath is foul, and appetite varies. Even when the appetite is good the body continues to waste, and the child becomes anemic and has the appearance of a child suffering from some form of tuberculosis. The only positive way of telling if a tapeworm is present is when segments of the worm are found in the stools.

#### Paragraph 867

TREATMENT. The treatment of the round worm and tapeworm should be under the care of the physician, who should have charge of the child in both cases and give such orders as are required in each case. The treatment of the pinworm is very effectual and they are easily removed by the use of medicated enemas, which can be given by the mother with very good results.

#### Paragraph 868

NOTE—Now remember, do not attempt to prescribe for, or give a child any kind of worm medicine in any case of suspected round or tapeworms until directed to do so by the family physician, because the treatment of these conditions is beyond the skill of the mother.

## Paragraph 869

#### INFECTION OR BLOOD POISON.

An infection is the result of some form of germ poison entering an injured condition of the skin, or mucous membrane, which leaves an open wound. After the wound becomes infected, there is generally more or less inflammation, which causes a series of local changes in the tissue; this constitutes the infected reaction to injury.

The tissue most liable to become infected are leep wounds that contain clotted blood, bruised tissue, and crushed wounds. These all favor the lodgment of germs. Healthy tissue offers complete protection from ordinary infection.

## Paragraph 870

NURSING TREATMENT. When a wound is infected, and the surrounding tissue becomes red, inflamed, and swollen, associated with more or less pain; oftentimes red streaks running up the arm or leg, with the patient having one or two degrees of temperature, we have a condition that needs immediate attention.

The wound should be thoroughly cleaned, if pus is present, with peroxide, and irrigated with some antiseptic solution, such as lysol solution 1-400, or chlorozene (one tablet dissolved in a pint of water). The limb should be elevated, and a moist dressing applied. Make a saturated solution of Epsom salts, and have it as hot as the patient can stand. Wring out Turkish towels and apply them locally. Hot water bottles should be applied on the outside of the towels, in order to keep up the even heat.

This should be continued night and day until the swelling has disappeared, and the tissue becomes white and wrinkled. Such hot applications will usually stop the infection and relieve the local condition. See that the bowels move freely. and give a light diet.

Give internally, one teaspoonful (adult dose) of Echtol (Battle) every two to six hours, depending upon the severity of the case. Give to children, according to age.

## Paragraph 871

## POISONS AND ANTIDOTES

In most all cases of poisoning, the nurse should use the stomach tube, and empty the stomach at once. The mother can produce prompt vomiting by using mustard whipped up in cream (2 parts mustard and 1 part cream), with hot water, and give a sufficient quantity until the patient vomits freely.

#### Paragraph 872

CORROSIVE SUBLIMATE or BICHLORIDE OF MERCURY:

Empty the stomach with emetic; give the whites of six eggs; give brandy or whiskey; demulcent drinks.

#### Paragraph 873

## CARBOLIC ACID:

Promote vomiting; Epsom salts well diluted, as a chemical antidote; wash out stomach with diluted alcohol (40 per cent), followed by water; give sweet oil, milk, flaxseed tea, white of egg freely to allay inflammation; heat to the extremities, and whiskey for collapse.

## Paragraph 874

LYE AND CAUSTICS, also the ALKALIES:

In this case do not use the stomach tube; promote vomiting by copious draughts of tepid water; give vinegar and water (equal parts), or diluted lemon juice (equal parts of lemon juice and water) to neutralize; give olive oil, white of egg, flaxseed tea. If a large amount of ammonia has been inhaled, let the patient smell vinegar freely.

#### Paragraph 875

#### ALCOHOL:

Wash out the stomach with warm water and coffee (2 parts water, 1 part coffee), using the stomach tube; keep body warm and head cold, and have the patient inhale ammonia.

## Paragraph 876

FLY PAPER, PARIS GREEN, ARSENIC, RAT POISON:

Empty the stomach at once by giving mustard and cream with warm water every fifteen minutes until effective. Mix a teaspoonful of calcined (burned) magnesia with a cupful of water; to this add 3 teaspoonfuls of tincture of iron and give in one dose. Repeat every ten or fifteen minutes for three or four doses. Give olive oil and brandy, with raw eggs, lime water and flour and water.

## Paragraph 877

## FISH, OYSTERS, PTOMAINES:

Empty the stomach and give copious draughts of strong tea; enema to unload the bowels; lime water 1 or 2 ounce doses for the vomiting, and give a large dose of castor oil (2 ounces), hot applications to the abdomen for pains.

## Paragraph 878

#### SILVER NITRATE:

Common table salt, milk, white of egg, flax-seed tea.

### Paragraph 879

#### STRYCHNINE:

Use the stomach tube, or empty the stomach with mustard and cream; give tannic acid or oakbark tea; give antidote in starch water per rectum if patient cannot swallow; control spasms with ether; artificial respiration; amyl nitrite for inhalation. Keep patient absolutely quiet.

#### Paragraph 880

#### TOBACCO:

Empty the stomach; keep the head low and feet high; large amount of warm water; strong tea or coffee with powdered charcoal; whiskey; keep the extremities warm; artificial respiration.

#### Paragraph 881

## OPIUM, LAUDANUM, MORPHINE:

Empty the stomach at any cost, and give strong tea or strong coffee; keep the patient awake and moving; brandy; external heat; artificial respiration.

#### Paragraph 882

#### MUSHROOMS:

Empty the stomach; castor oil; copious enemas; brandy; keep the body warm.

#### Paragraph 883

#### LEAD POISONING:

Empty the stomach; give Epsom salts; alum; hot fomentations to the abdomen; demulcent drinks.

## Paragraph 884

ACETIC, HYDROCHLORIC, NITRIC, NITRO-MURIATIC, or SULPHURIC ACIDS:

In these cases give no emetics and do not use the stomach tube; give large draughts of lime water; solutions of baking soda, magnesia, or plaster from the wall; strong soapsuds to neutralize the acid; olive oil, white of egg; barley water; flaxseed tea to allay the inflammation.

## Paragraph 885

IODINE:

Empty the stomach; give plenty of boiled starch, strong tea, flour paste, flaxseed tea; amyl nitrite to the nostrils.

NOTE—In treating a case of poisoning, the above instructions will apply to both children and adults, only reduce the amount of antidotes for children; call your physician and treat the case as directed until he arrives.

### Paragraph 886

POISON OAK OR POISON IVY.

In order to prevent coming in contact with poison ivy, and to protect children from this intense inflammation of the skin, mothers and nurses who have children under their care, should be familiar with the plant, and keep children away from it. The leaves are arranged in clusters of three, with smooth edges. It is often found climbing over fences and trees in many localities.

The only vine that resembles ivy is the Virginia creeper. The leaves are practically the same, only the Virginia creeper grows in clusters of five leaves instead of three.

After a child comes in contact with poison ivy, a rash comes out in a few hours, or a day, after the exposure. It does not spread fast. The skin becomes swollen, red, hot and itchy, and is thickly covered with blisters from the size of a pin-head to a split pea. The blisters soon break and the water discharges, forming in dry crusts. We have seen children with the face so swollen that they

can scarcely open their eyes. The disease lasts a week or longer in ordinary cases; mild cases not so long.

## Paragraph 887

TREATMENT. Application of saturated solution of boracic acid, applied with a cloth wet in the solution, but see that the cloths are kept wet, and not allowed to dry. A very common treatment is a lead and opium wash, which is applied to the affected parts. The druggist will prepare it for you. It is known as the ''black wash,'' and before it becomes quite dry, after applying the ''black wash,'' smear the surface well with oxide of zinc ointment.

# Paragraph 888 FROST BITES.

When any parts of the body are exposed to the cold, they become frozen, and they are quite numb, white and wrinkled. When warmed, the frozen parts become quite red, swollen and itchy. If the action of the cold has been very severe, blisters will form upon the broken surface, the tissue dies, and mortification sets in. Generally, unless the cold has been too severe, the frozen parts, under proper treatment, will return to their normal condition. The parts regain their sensation and are very painful. The swelling disappears, and there is no further trouble.

#### Paragraph 889

TREATMENT. The treatment of freezing consists of placing the patient in a cool room for several hours, and applying cold water to the frozen parts, or snow is sometimes applied. The patient should be rubbed with cold water, or wrapped in cold wet cloths. Ichthyol ointment, 20 per cent, may be applied to the parts after they have regained sensation. Great care should be taken in removing the patient into a warm room.

# Paragraph 890 CHILBLAINS.

When any part of the body becomes frozen or chilled, there develops a condition known as chilblains. The skin becomes red, smooth and shiny

in spots, burns severely when the parts become warm. At times, blisters may form, and ulcers may develop if caused by irritation from the shoe. Chilblains generally occur on the feet, sometimes on the hands; rarely it is seen on the nose, cheeks and ears; especially if the parts have been frost bitten. Chilblains are very painful when the parts become warm. They are more apt to occur in children with poor circulation. It often develops in some individuals in fall and remains until the warm weather returns.

The cause of chilblains is a sudden change in the body temperature. We often get chilblains when the hands and feet are very cold, and they are warmed quickly.

## Paragraph 891

TREATMENT. The best treatment for chilblains is to dress the feet properly. A person thus affected, should wear easy shoes with warm woolen stockings, and not wear any garters that will impair the circulation. The stockings should be long enough to cover the entire leg. If the chilblains affect the hands, warm mittens should be worn, so the hands would not become chilled. Local application of the tincture of iodine, or painting the parts frequently with Monsel's solution will give some relief.

### Paragraph 892

#### INFLAMMATION OF THE EYES.

Colds often settle in the eyes, and the lids become red and inflamed. Often some infection or dirt may get into the eye during the child's play. When a child has sore eyes, they should be thoroughly washed every hour or two with boracic acid solution, and kept perfectly clean. If this does not allay the inflammation, one drop of a 20 per cent Argyrol may be dropped into the eye with an eye dropper, two or three times a day. Wash out the eyes good each time with boracic acid solution before applying the Argyrol. Hot packs of boracic acid solution, when applied to the eyes (not too heavy), are of value to allay the inflammation.

## Paragraph 893

INFLAMMATION OF THE BREASTS IN INFANTS.

In young infants of both sexes, the breasts often become swollen and very tender, and secrete a milk-like fluid. This generally occurs during the second and third week, and unless the tenderness and swelling is very marked, the trouble will disappear in twelve to fourteen days if they are left alone, and will require no treatment. In some cases the swelling is very marked, and the breasts become quite red and inflamed. Such cases require treatment.

## Paragraph 894

TREATMENT. The treatment consists of applying hot moist dressings of a saturated solution of Epsom salts. Little pads are wrung out of this solution and placed on the breasts during the day, and can be kept warm with an infant hot water bottle. It should not be hot enough to burn. Apply a poultice of antiphlogistine to the breasts during the night. If this treatment is faithfully applied for a few days, it will generally effect a cure. Never squeeze or massage the breasts of new-born infants. Such a procedure is very harmful, and may be the cause of producing an abscess.

#### Paragraph 895

#### COLDS IN THE HEAD.

Children often have colds that affect the mucous membrane of the nose and throat, and when left untreated the inflammation has a tendency to extend up the Eustachian Tube to the ears, causing middle ear trouble. It is necessary for a mother to realize this fact and to give immediate and proper attention to such cases.

## Paragraph 896

TREATMENT. The best treatment for a cold in the head is to give a good laxative and hot bath. Give, internally, one tablet of 1/3 grain Calcidin every hour for the first day, and after that every two hours. If there is much discharge from the nose, put two to five drops of liquid Albolene and Pinoleum Compound in the nostrils two or three times a

day. This line of treatment is for a child between two and four years of age, and when over four years it should be given 1 grain of Calcidin instead of 1/3 grain, with all other treatment the same. Give an enema once or twice a day in addition to the laxative, in order to keep the bowels empty.

When the cold settles on the lungs, and the child begins to cough, put a mustard plaster on the chest. In severe cases put on a mustard plaster twice a day, and after the mustard plaster, apply camphorated oil. Give, internally, for the cough and lungs, from ½ to 1 teaspoonful of Abortussis every two hours; if over four years, give 1½ teaspoonfuls. When this treatment does not give relief, and the child does not improve, call the family physician, as some complication must be developing.

## Paragraph 897

#### SORE THROAT.

Sore throat often develops from the tonsils or mucous membrane of the throat, as the result of taking cold. At the beginning of a sore throat, give a laxative (a dose of Epsom salts, citrate of magnesia, or Abbott's Saline Laxative), and see that the bowels move freely. A gargle for such a case would be Menthol Compound tablets (Abbott's). Dissolve one tablet in half a glass of water, and gargle the throat every hour or two, and this will often give great relief.

If there are white spots on the tonsils, then it is a case of tonsillitis, requiring more extentive treatment. The headache tablets may be given to relieve the headache that is generally associated with tonsillitis, and if there is much temperature, give I Dosimetric Trinity granule every hour until the fever is gone. When sore throat is associated with tonsillitis in adults, the headache tablets and fever granules as mentioned above are given. When a child has a sore throat or tonsillitis, the gargle of Menthol Compound tablets is very beneficial. They can be used in any case where a child is able to gargle. The fever medicine or headache tablet must be given according to age.

## Paragraph 898 HIVES.

Hives is a distinct peculiar rash on the skin, characterized by raised patches that have a pinkish and whitish color in appearance. They vary in size and look very much like insect bites. They often occur very suddenly and last from a few hours to a day. They may disappear for a day or a few hours and then return again. Acute cases of hives generally last from two to four days, and sometimes they become chronic. Hives in children are, as a general rule, associated with rheumatism, that is, most of them give a rheumatic history.

The intense itching and burning makes a child very restless. Ninety-five per cent of the cases in children are caused by some disturbance in the digestive organs. Sometimes one certain kind of diet will cause hives; such as, strawberries, some forms of fish, sausage, tomatoes, buckwheat and pineapple. It all depends on the individual; what affects one will not another.

Medicines of various kinds will also cause hives; such as quinine, arsenic, and antipyrin. Diphtheric anti toxin will cause hives in about twenty per cent of all cases in which it is given. Digestive disorders of any nature, whether it be acute or chronic, will cause hives. Sometimes external irritation like bites of insects, clothing that causes irritation of the skin, clothing that is too tight, or anything that irritates the skin, will cause hives.

## Paragraph 899

NURSING TREATMENT. The first thing necessary in treating a case of hives is to thoroughly empty the alimentary canal. This is best accomplished by a full dose of castor oil, 2 to 4 teaspoonfuls given in orange juice. If this cannot be taken by a child, give calomel in one-tenth grain doses every fifteen minutes or half hour, until ten tablets have been given, and in two hours after the last dose, give 2 or 3 teaspoonfuls of milk of magnesia. When it is desired to have the bowels move, give a

saline enema. Give the child plenty of water to drink, and reduce the diet to broths and gruels, or the child may have a little toast or dried bread. Milk should not be given in any form.

For local application, the parts may be bathed with one per cent solution of carbolic acid, or apply a menthol cream; that is 1 grain of menthol to an ounce of cold cream. A bath of bicarbonate of soda is also soothing, and will sometimes allay the intense itching and burning.

When the laxative, restricted diet, and local application, as mentioned, does not relieve the condition, the best internal remedy is salicy-late of soda. For a child three years old, 2 grains of the salicylate of soda may be given every two hours with bicarbonate of soda; give five doses every twenty-four hours. The dose is increased according to the age of the child until 12 to 24 grains of the salicylate of soda is given in the twenty-four hours.

In obstinate cases, and when they occur often, the bowels should be kept perfectly free from any intestinal irritation. This is best accomplished by giving Abbott's Intestinal antiseptic, one grain, and peptenzyme, one and one-half grains, after meals and at bedtime. This should be continued for some time, and is the correct dose for a child from three to four years of age. The dose of intestinal antiseptic should be given according to age.

## Paragraph 900 ECZEMA.

Eczema in children is due to two different causes; some derangement of the stomach and bowels, or from some external irritation. Eczema occurs in children in all its combinations, and the changed condition of the skin is very sudden. Cases that originate from some internal trouble is most frequent and troublesome. It generally occurs in children from one to twelve months old, and it is rare for a case to develop after the nursing age. It may occur on the face or any part of the body. The physical condition of the child does not seem

to exert any influence as to the case, either in breast-fed or bottle-fed; children may be in perfect health in every other respect. In treating such a case, our efforts must be directed towards the stomach and bowels.

When eczema is caused by some local irritation, the skin is usually sensitive. Sometimes strong soaps, vigorously rubbed, or scratchy, irritating clothing will cause eczema, and to relieve this condition, the source of irritation should be removed. Sometimes eczema appears where two skin surfaces are constantly touching each other, like the skin-folds of the neck, the groin, under the arms, and the elbow joints.

## Paragraph 901

TREATMENT. The local treatment for eczema, when the cause is of internal origin, is very unsatisfactory. The best that can be done is to relieve the itching and make the child more comfortable. As a general rule, many of the local applications applied to the face soon rub off. They are too strong and often do more harm than good. When the ointment can be applied under a mask for the face, or when it is used on other parts of the body, so that it can be bandaged on, the following is of value: Take tar ointment (U. S. P.) 1 part, and ointment of rose water 4 to 6 parts. The strength will depend upon the irritability of the skin. This ointment is spread thickly upon old linen and bound firmly to the parts; dressings should be changed morning and evening. If they cause any irritation, the amount of tar should be reduced.

## Paragraph 902

A child who has eczema must have its bath, and the best bath to use in this case is the bran or soda bath. Great care must be taken to avoid irritating the skin by too much friction. When eczema is due to local causes, the source of irritation should be removed.

## Paragraph 903

When eczema occurs in the folds of the skin, put gauze or pledgets of cotton between the parts,

first using powdered starch and oxide of zinc (equal parts) freely. The cotton should be removed as soon as it becomes moist, and fresh applications made. The diet should be regulated, and if the child is breast-fed, constipation of the mother, as well as the child, must be relieved. When the child is making the proper gains, nursing should not be discontinued on account of the eczema.

A mother who is nursing an infant with eczema should give a great deal of attention to her diet. She should not eat too rich food, and if she has been in the habit of drinking beer, tea, or coffee in excess, it should be discontinued, and a plain diet substituted.

Bottle-fed babies, on the whole, are easier treated than the breast-fed, as the diet can be regulated in a more satisfactory manner. It is generally some one of the elements in the mixture at fault. It may be too much sugar, or too much fat or proteid. We reduce first one and then the other, until we have discovered the particular part of food that does not agree with the child; yet the food should not be reduced to such an extent that the infant will not receive the proper amount of nourishment.

#### Paragraph 904

The urine in most cases of eczema is very strongly acid in reaction, and it is a good plan to give one grain of bicarbonate of soda to each ounce of food.

#### Paragraph 905

In applying local dressings to eczema on the face, possibly the one that is mostly used is bassorin paste. The paste is spread on the affected parts and allowed to dry, which forms a protection. It should not be removed, but allowed to peel off; when this occurs a fresh dressing should be applied. The face should not be washed. A half dram of oxide of zinc to the ounce may be combined with the paste. A small amount of ichthyol or tar (half dram to the ounce) may also be added when a case does not make satisfactory progress.

#### TRAINING OF INFANTS AND CHILDREN

#### Paragraph 906

INSOMNIA OR SLEEPLESSNESS.

This condition is generally due to being over-tired, pain of any kind, or intestinal trouble like constipation or indigestion. Oftentimes children sleep too much during the day, and cannot sleep at night; they are put to bed too early, or play too much just before bedtime; or in older children, eating too heavy a supper just before going to bed will cause insomnia. Poorly ventilated bedrooms, sometimes bright lights, covering a child too warmly, are all causes of wakefulness in a child. Such conditions should be remedied in order that the child may be able to sleep.

A baby nursing too frequently during the day has a desire to feed often at night. Babies that have been handled too much, taken out for street-car rides or long auto trips, are often overfatigued and too tired to sleep. Nervous children, with apparently no cause, cannot sleep, and in such cases it is best to give the daily bath at bedtime, making it slightly warmer than usual, giving only a simple sponge in the morning.

Sometimes putting older children to bed at rather a late hour will cause them to sleep. It is best not to give medicine for such conditions, unless it be a very simple remedy, and one that would be recommended by medical advice.

## Paragraph 907 VOMITING.

The cause of vomiting depends upon the functions of the stomach. When it is over-fed, or some irritation of the mucous membrane, or other various causes, whether acute or chronic, the stomach becomes intolerant, and vomiting is the result.

Conditions not associated with the stomach will also cause vomiting. Any abnormal condition of the intestines, such as intestinal obstruction, will cause it. Many of the acute infectious diseases are ushered in, as a rule, with vomiting. In appendicitis in children, vomiting is usually

## LECTURES OF INTEREST TO WOMEN

one of the symptoms. Vomiting is also caused by fright, shock, over-exercise, or straining, as in whooping cough, or it may be purely nervousness.

#### Paragraph 908

NURSING TREATMENT. We will consider the management of different types of vomiting separately, with the diseases and conditions with which they are associated. In normal cases, when the nursing is successful, there is more or less regurgitation of the milk (spitting up small amounts). When the nursing is unsuccessful, there is more or less vomiting, associated with stomach and bowel trouble. Especially is this true when we have milk that has excessive fat.

Some infants vomit more or less during the nursing period, yet the child gains; is normal in every way, and does not seem to suffer any ill-effects from the vomiting. In bottle-fed babies, when the food is too strong, and there is poor digestion and colic, vomiting, as a rule, occurs, and is caused by an excessive amount of fat in the food.

Persistent vomiting is often seen in children. The attack comes on suddenly, with little or no warning, and the contents of the stomach are vomited. It generally stops as abruptly as it began; it may last for a few hours or the entire day. Sometimes the attack is quite prolonged, lasting several days. This form of vomiting is often associated with rheumatic children. Do not give any food or water during the attacks. Nutrient enemas and colon flushings are used in prolonged cases; that is, if they last two or three days.

These patients suffer a great deal from thirst, and the thirst can be satisfied by giving the child a pint or so of normal salt solution by the drop method. A child five years old often retains as much as two pints of fluid a day.

It is best to begin with nutrient enemas on the third and fourth day. The best nutrient enema in this case would be four to six ounces of complete peptonized skimmed milk, to which has been added

### TRAINING OF INFANTS AND CHILDREN

the whites of one or two eggs; this is given every eight hours. The nutrient enemas and saline solution will furnish enough nourishment until the vomiting ceases.

In many cases of persistent vomiting, regardless of the cause, when children cannot retain any nourishment when taken by the mouth, it will be found that they can often retain nourishment when given by forced feeding, or gavage, which should be used.

## Paragraph 909 ACCIDENTS.

Various accidents occur in children, from getting the smallest splinter in the finger to the fracture of bones, including cuts and bruises. In removing splinters, the parts should first be rendered antiseptic by pouring alcohol over the parts, then endeavor to remove the splinter. If successful, disinfect the wound. Possibly the best disinfectant is the application of turpentine. It should be poured over the parts; then a piece of gauze should be moistened with turpentine and applied, and the same held in place by a suitable bandage. Care should be taken that the turpentine does not blister the parts. After the first few hours the turpentine dressing can be removed, and alcohol used instead, which consists of carefully sponging off the parts with alcohol two or three times a day. and keeping the irritated surface well protected with gauze dressing.

In cases of cuts and bruises, alcohol will be very irritating to children, and it is better to clean the parts off with a weak solution of bichloride 1-5000, or a Lysol solution (1 teaspoonful to a quart of sterile water). If the cut surface is a clean surface and has no ragged edge, and the edges can be placed together, it should be wrapped up in the turpentine dressing, the same as used for splinters. Sometimes in cuts, the hemorrhage is quite severe, and gentle pressure should be used until the hemorrhage stops before applying the dressing.

In cases where there has been an accidental bruise, the skin not cut but the outer layer of skin

is torn off over a certain area, the best way to treat such a bruise is to render it perfectly clean with a weak lysol solution (½ teaspoonful to the quart). Clean off the tissues around the bruised parts with alcohol; then apply locally oxide zinc ointment, and at each dressing the parts should be thoroughly cleaned, using one teaspoonful of Lysol to a quart of sterile water.

In case of fractured bones, there is nothing that a mother can do, only place the patient in the most comfortable position and call for medical assistance at once.

Other conditions come under "Accidents", like foreign bodies in the ear and nose. Children are prone to put all kinds of foreign bodies in the nose, and it oftentimes requires great skill on the part of the mother to remove them. Sometimes it is impossible for them to do so, and they must consult a physician. Do not try to push any foreign body into the nose or ear. If it has entered the canal too far, it is better to leave it alone rather than to resort to any further manipulation.

Sprains are often caused by accidents, and sometimes are as serious, and require as long a time to get well as fractures. Sprains generally require absolute rest, and local applications of hot compresses will give relief until the attending physician can be summoned.

# Paragraph 910 FRACTURES.

The first aid that a mother or nurse can give a child, that will add greatly to its comfort, is to place the fractured limb in the proper position, and remove the clothing. This should be done in an intelligent manner. The clothing should be removed, if possible, from the uninjured part first. If this is difficult, the clothing may be cut along the seams.

The manipulation of the injured parts should be carried out in as gentle a manner as possible. Pull on the arm or leg, as the case may be, and place the fragments as near as you can, so they will correspond with the opposite limb, and apply the dressing as directed.

The first aid care and dressings would depend, of course, upon the individual bone that was fractured, and to consider each one separately will be the best way to instruct the mother as to how she would be of most service. Therefore, we will mention a few of the most common fractures.

## Paragraph 911

Fracture of the lower jaw. This can be held in position by holding the jaw up with a handkerchief, and tying the handkerchief on top of the head.

Fracture of the collar bone. Place the arm in a sling. The sling can be made quickly by folding a piece of muslin one yard square, so as to form a triangle. Support the arm by placing it in the sling, and tie the sling around the neck.

Fracture of the long bones of the arm above the elbow. The sling can be applied the same as used for the collar bone, and a splint of wood may be placed on the outer side of the arm, which is held in position against the chest with a bandage. This bandage is applied around the chest, including the arm.

### Paragraph 912

Fracture of the elbow. Use the sling.

Fracture of the arm below the elbow. Two splints well wrapped with cotton a little wider than the forearm can be applied along the back and in front respectively, extending from the elbow to the middle of the hand, tying on with a bandage or strips of muslin. Support the arm with a sling.

Fracture of the ribs. The best relief that a mother or nurse could give such a case would be to bandage with a circular bandage of linen or muslin, applied around the chest. The bandage should be wide enough to extend from under the arms to the umbilicus. This bandage should be quite firmly applied and secured with safety pins.

#### Paragraph 913

Fracture of the leg above the knee. Take a board long enough to extend from under the arm to the sole of the foot. After padding it well with cotton or suitable cloth (piece of an old blanket), it is fastened to the outer side of the limb or body by a number of turns of wide (four-inch) muslin or linen bandage. While this is being applied, traction should be made upon the foot.

### Paragraph 914

Fracture of the leg below the knee, also the foot and ankle. The blanket dressing may be employed. The blanket splint is quickly made by folding a blanket in such a manner that it extends from the middle of the injured thigh to below the foot. In order to make the splint more firm, take two broom sticks; cut off the proper length, and roll them up in a blanket, beginning with the one on one side and then on the other, and the broomsticks that are on each side of the blanket, when rolled together, form a splint on each side of the leg. When the blanket is rolled up, it makes a sort of a trough for the limb. This blanket is firmly secured by tying bandages around the leg; one bandage just above the knee, another just below the knee, one about on a level with the ankle, and another just below the bottom of the foot; it being so placed that it will act as a foot rest and support the foot.

A large pillow can be used in place of the blanket, in fractures near the ankle or foot. Hollow the pillow out a little in the center; pin the edges together below the foot, so that they act as a support for the toes. This will not allow the foot to drop forward. Then tie a few bandages around it (six inches apart), which will bring the pillow up on both sides of the leg and hold it quite securely.

It is important that permanent dressings be applied as soon as possible, because the sooner the fracture is reduced the better the results will be, as it is easier done at that time, before there is any swelling of the parts, and the mother should secure medical aid without delay. Have the case

sent to the hospital or X-ray laboratory, and have an X-ray photo taken. This should be done in all cases of fractures.

## Paragraph 915 DISLOCATIONS.

Dislocation of any of the various joints is a displacement of the particular ends of the bones which enter into the formation of the joint. There is a deformity of the joint when dislocation occurs; movements of the bones are usually limited, and they pain on motion. The child will be unable to use the limb to more or less extent.

To tell the difference between a dislocation and fracture: In dislocation, the movements may be quite free, while in a fracture they are quite limited. An X-ray picture should be taken in all cases of dislocations, and they should be treated immediately after they occur.

The dressings which will be applied in a dislocation will be practically the same as for a fracture; that is, placing the parts at absolute rest. If you have a dislocation at the elbow, shoulder, or wrist, use a sling to support the arm. Dislocations at the hip, knee, or ankle, treat the same as if you had a fracture above or below the knee.

# Paragraph 916 DEFORMITIES.

Children are oftentimes born with excessive fingers and toes. Sometimes the last three toes are all the same length and size; other times the skin between the fingers and toes unites, forming a web of skin, the same as in ducks' feet. Web-fingers or toes require an operation, and should be treated by a surgeon.

## Paragraph 917

CLUB-FOOT. The condition known as club-foot may be present at birth, or it may be acquired. It is an abnormal shape of the foot, in which the front part of the foot is turned inward, and the heel is raised. If proper fitting braces are applied immediately, it will often result in a cure. Some cases require an operation.

### Paragraph 918

FLAT FOOT. Another condition, known as flat foot, is when the arch in the center gives away and the foot flattens out, and most of the foot presses against the ground when walking. This condition causes a child to tire easily and walk awkwardly. Sometimes it causes pain on account of the weakened arch. The child should be taken to an orthopedic instrument maker, and have the proper arch made, which will give the foot the proper support, or have the foot strapped. All such cases require medical attention.

#### Paragraph 919

PIGEON TOE. Another very common condition is pigeon-toe deformity. This is when there is an inward rotation of the legs in walking. This condition is somewhat natural in infancy and early childhood. but disappears as the child receives proper training in walking. If it continues, have the child wear a pigeon-toe shoe, which is intended to turn the toes out.

### Paragraph 920

BOW-LEGS. Another condition of deformity is bow-legs. This generally results from rickets, also from allowing a child to stand too soon and bear its weight upon its feet. The mother should be very careful when applying the diaper, to see that it is not too thick between the legs, as this stretches the thighs too far apart, and will cause the child to have bow-legs.

A mother can do a great deal in the way of massaging the legs several times a day; applying pressure with the hands in such a manner as to have a tendency to straighten the curve. Sometimes this is very effective. There is a general tendency of the bow-legs to disappear as the child becomes older. If the simple treatment given does not effect a cure, it will be necessary to have braces applied.

#### Paragraph 921

KNOCK-KNEE. A condition similar to bow-legs is knock-knee. The cause and treatment is practically the same.

## Paragraph 922

HIP-JOINT DISEASE. Every mother should be familiar with the early symptoms of hip-joint disease, because if neglected it becomes very serious. It is a tubercular inflammation of the hip-joint. When the disease first develops, the child will complain of pain in the knee, while the trouble is really in the hip. The child will start suddenly from its sleep, suffering with pain. It will appear lame in walking, lasting, at first, only a few days at a time, and if the mother be observing, she will notice that the child stands on the good leg and favors the diseased one.

Mothers who are not familiar with this condition may make a very serious mistake by thinking such pains are growing pains. The hip-joint disease is so serious a condition that the physician should be consulted, and the child placed under proper treatment early in the disease, because recovery is very tedious at the best. Abscesses often form, and sometimes such cases prove fatal on account of being neglected when they should have received proper treatment.

### Paragraph 923

CURVATURE OF THE SPINE. A mother, when bathing her child, should examine the spine carefully at regular intervals, and note if there is any deformity. There are three principal curvatures of the spine: the lateral curvature, the angular curvature and the outward curvature.

The lateral curvature of the spine is when the spinal column has a tendency to form the letter S. This is caused by a faulty position in sitting while at school, or by leaving an infant sit too long in a high chair when it is very young. Rickets will sometimes cause this condition. It is also noticed in older children, when they carry too heavy a weight with the same arm; we have seen this in boys who carry papers, and carry too much weight on one arm. The condition is a weakness of the articulations and muscles, which allow the bones to form such curves.

The angular curve is due to the infection of the bones themselves. The bone becomes soft on

account of the decay, and it is generally due to tubercular conditions. The physician should be notified of such a condition at once, as it is of grave importance. We very rarely see this condition under two years of age. One of the chief symptoms is a tendency to fall forward when walking. There is a peculiar stiffness or rigidity of the back as well. The child gets in the habit of assuming this position in order to avoid any jarring.

A child who has angular curvature of the spine does not pick things up very quickly. It does it by bending the knee. Pain is often felt in any motion of the spine, not only at the seat of the trouble, but often in the abdomen. The deformity is a condition in which the spine is straight up and down, but it has angles in and out, due to the diseased bone.

The third condition of curvature of the spine is when the spine bows out, or the backward curvature. This occurs in severe cases of rickets, and is due to a muscular weakness which generally involves the whole spine. It is one round or long curve. When the other symptoms of rickets are cured, it will generally disappear at the same time.

# Paragraph 924 RHEUMATISM.

Rheumatism is rarely seen in children under two years of age. Sometimes it occurs between the second and fourth year, but it is more common after the fourth year. There is a close relation between tonsillitis, rheumatic infection, and many of the inflammatory conditions of the lungs and throat, as well as catarrhal inflammation of the respiratory tract.

When a child suffers from rheumatism, the joints are not involved as frequently as they are in adults. We are inclined to believe that children suffering from muscular pains do not receive the detailed attention they should have; they are too frequently considered as growing pains. We often find that children who have a rheumatic inheritance have their share of tonsillitis and sore throat.

Rheumatism is caused by the retention of poison in the system, due to faulty digestion and poor elimination. In rheumatic children we invariably find one or both of the following conditions present: They have a history of hereditary rheumatism, or they are children whose food is largely composed of red meat.

#### Paragraph 925

NURSING TREATMENT. One of the most important things to do is to eliminate red meat and sugar from the child's diet, or only give just enough sugar to make the food palatable. It is a good idea to use saccharine as a substitute for sugar. Give the child plenty of green vegetables; potatoes boiled with the skins on. In the way of meats, allow fish, eggs, and poultry. Cereals and rice are also given, and when oatmeal is given, it should be boiled two and a half to three hours. Children who have repeated attacks of coryza or tonsillitis, and no rheumatic history, should have red meat very sparingly, every second or third day; very little sugar; and candy only on rare occasions.

When the joints become involved, much comfort can be afforded by supporting the affected joints with a cushion or pillow. Apply a moist dressing of lead and opium solution (U. S. P.). Warm the solution, moisten the gauze, and place it over and around the joint; then over the gauze put some oil silk to retain the heat and moisture; over all a flannel bandage is applied. Hot water bottles should be placed around the outside of the flannel bandage. Be careful not to have them too hot. When the pain is very severe, these dressings should be changed every hour.

Another good local treatment for inflamed joints is one teaspoonful of oil of wintergreen in an ounce of pure goose grease. This could be applied locally two or three times a day, with the joint wrapped in cotton or flannel dressings, and kept very warm with hot water bottles.

It is necessary to see that the bowels keep regular, and an excellent anti-rheumatic, which has a cathartic effect, is salithia. For a child five years old, two teaspoonfuls should be dissolved in a half a glass of water, and give the child a teaspoonful several times a day, or enough to keep the bowels moving two or three times during the twenty-four hours.

#### Paragraph 926

DRUGS. The two important drugs in treating rheumatism in children are bicarbonate of soda and salicylate of soda. The administration of the salicylate of soda can be given by the mother. She can get chemically pure bicarbonate of soda from the druggist. Give a child five or ten years old, 10 grains two hours after breakfast and dinner for the first week; the second week give 5 grains three times a day, after each meal (two hours after eating); the third week, give 5 grains twice a day for a week. Then omit the bicarbonate of soda for ten days or two weeks. After that give it twice a day for one week, and then omit two weeks. Continue giving the medicine one week and omit two weeks for about two or three months.

#### Paragraph 927

Proper regulation of diet, administration of bicarbonate of soda as directed, and local treatment as outlined, is a very rational and successful treatment for rheumatism.

When there is rheumatic history, a special diet should be continued for some time, and if there is any sign of the rheumatism returning, the mother should give another course of the bicarbonate of soda. Now if this treatment does not prove satisfactory, and it requires the administration of salicylate of soda, we believe it would be wise for the mother to consult her family physician, in order to get the best results.

The salicylate of soda is given in quite large doses. It has a tendency to interfere with indigestion, and is somewhat of a heart depressant, and the case while taking this should be under medical care.

In conclusion, it might be well to remember that when a child has frequent attacks of catarrhal

## TRAINING OF INFANTS AND CHILDREN

conditions of the nose, throat and lungs, with no tonsils or adenoids, we can safely say that rheumatism is a caustive factor.

## Paragraph 928 CHOLERA INFANTUM.

Cholera infantum, or "summer complaint," as it is often called, has a distinctive toxic origin, which can, in nearly every case, be traced to impure milk. Children who have had bowel trouble early in life are more apt to have cholera infantum in their second summer.

The prominent symptoms of this disease are high temperature, profuse vomiting, diarrhea, stools containing mucous and blood. The yellowish, green-brown stools possess a peculiar unmistakable odor, which once smelled will never be taken for anything else.

In children suffering with this trouble, the prostration is extreme. The nervous system is profoundly depressed. A child sick only a few hours with cholera infantum may show all the symptoms of exhaustion. Often convulsions occur with each stool. The skin becomes cold and clammy while the rectal temperature will be 103 to 105; eyes become sunken, fontanel depressed, and the mouth is drawn. The diarrhea and vomiting may often be checked only to have the little patient die from congestion of the brain, or profound toxaemia.

This reminds us of the fact that it is important not to mistake cholera infantum for meningitis. Cholera infantum requires the proper treatment early, in order to be successful.

#### Paragraph 929

NURSING TREATMENT. When a child is taken with the above symptoms, the physician should be summoned at once. Give a dose of castor oil. Place the infant in a warm bath of magnesium sulphate solution (one ounce to the quart); with this the entire body is sponged. Place into the bowel, one ounce of pure olive oil, to which two drops of oil of turpentine is added. Apply pressure on each side

of the buttocks with the fingers, in order that the oil may be retained, and inject, very gently, into the rectum about a pint of warm, half strength, normal salt solution. The infant's legs and buttocks are raised slightly so as to allow the oil and water to ascend.

Now pass a large catheter, attached to a bulb or fountain syringe, well up into the bowel; through this, one or two pints of solution of sulpho carbolates (40 grains to the pint) is injected into the intestines. The catheter is separated from the syringe and this fluid is allowed to run out, and may be repeated. This thoroughly washes the bowel, and any fluid remaining will serve to prevent further infection. In severe cases this has proven very successful. The child is dried well and wrapped in a flannel, is kept thoroughly warm, but in a room where there is good ventilation.

By the time the mother or nurse has accomplished this, the physician should be at hand to carry out any further medication that may be necessary, and give such instructions as may be required. The child should wear dry warm flannels, and hot applications should be applied to the abdomen. Cold may also be applied to the head in cases where the temperature is high. Stop giving all food except barley water, until the case is seen by the physician; he will order the proper diet.

## Paragraph 930 CHOLERA MORBUS.

Cholera Morbus is an acute inflammation of the stomach and bowels, generally characterized by vomiting, purging and painful cramps. It is quite a treacherous disease, often beginning very mildly and occasionally terminating fatally; therefore, no case, no matter how mild, should be neglected. This condition is generally caused by over-eating of indigestible foods—such as unripe fruits that children so often eat.

The first symptoms of cholera morbus are nausea, vomiting and diarrhea, consisting of large watery stools, often containing blood. The whole

system becomes affected on account of the extreme nervous shock caused by the attack, which often comes on suddenly. Sometimes the amount of vomiting and purging is sufficient to drain the system of enormous quantities of fluid, which results in great thirst. It is very difficult to quench the thirst on account of the stomach not retaining the water, and the rectum and colon will not retain a sufficient amount of normal saline solution to attain the desired results.

#### Paragraph 931

NURSING TREATMENT. The nursing treatment requires absolute rest, with the child in bed, hot applications applied to the abdomen, mustard plaster to the stomach. If the child becomes prostrate it will require stimulants. Give a dose of castor oil, colon irrigation, and no food except barley water. If the case does not improve after this treatment, call for medical aid.

## Paragraph 932

#### MALARIA.

It is necessary that a positive diagnosis be made before a child is treated for malaria. A blood examination should be made to definitely determine if malaria exists. The diagnosis of malaria is often made in children, and they are given quinine when the condition does not exist. The periodic temperature that does not respond to quinine in full doses is not, as a rule, an uncomplicated case of malaria. Children are very susceptible to fevers of the periodic type, and conditions like intestinal infection, inflammation of the ear, pus in the plural cavity and grippe infections. Any one of these conditions may cause an elevation of the temperature, more or less of the periodic type, covering a considerable period.

## Paragraph 933

TREATMENT. After we are positive that the child has malaria, quinine should be given in reasonably large doses. Children stand it well, and it must be given in larger doses than comparatively required for the adult. Care must be taken that it

does not cause vomiting. It is best given after meals, in solution or in capsule. A child under eighteen months of age will require from 8 to 12 grains daily. 2 or 3 grains of the bisulphate may be given at a dose; four doses being given in twentyfour hours. Quinine chocolate tablets form a convenient way to give quinine to children. It may also be disguised with yerba santa. The only objection to giving quinine chocolate tablets is that the child who has poor digestion may suffer by an increase of the trouble. The one grain of the tannate of quinine in chocolate tablets only represents onethird of a grain of the sulphate. The same may be said of the yerba santa, because it contains so much sugar. The syrup of quinine and chocolate (Merrell) is also a very convenient way to give quinine; each teaspoonful represents two grains. The bisulphate may be given in solution in distilled water, followed by a teaspoonful of orange juice. In older children—those from two to six years of age require from 15 to 30 grains daily to control the disease it is given in yerba santa, unless the child can be taught to take a capsule. Then 3-grain doses may be given every two hours until the child has taken the required amount. The practice of adults in giving a large dose of quinine a few hours preceding the expected chill, does not answer well in children, because such large doses may cause vomiting.

When it is difficult to administer quinine by mouth, or it cannot be given in large enough doses without causing stomach trouble, it may be given intravenously by preparations on the market specially prepared for that purpose. The use of quinine should not be stopped in malaria with the fever. It should be given for a week or ten days after the temperature fails to rise, unless there is a subnormal temperature; then it is reduced to one-half the amount, or temporarily discontinued for a few days. It is difficult to tell when a case of malaria is cured. Oftentimes we think a patient is perfectly well, and weeks after he will develop another attack. Whether it is a new infection, or remains of the old infection, is difficult to say. Authorities believe it is the old infection that remained

## TRAINING OF INFANTS AND CHILDREN

inactive in the spleen, and in order to prevent this recurrence, the quinine should be given for a week of each month for at least a year following the original attack. The continual administration of the quinine will generally prevent the attacks and effect a cure.

## Paragraph 934 IMPETIGO.

Impetigo is a skin disease very common in children, and it is characterized by large, yellow scabs under which pus is secreted. It is very contagious and spreads rapidly over the face, hands or any part of the body that may become infected, and unless it is successfully treated it will cover the entire face. We have seen cases so completely covering the face that a pencil point could not be placed upon normal tissue.

The treatment consists of cleansing the scabs off with peroxide of hydrogen, and when there is not too much surface involved sponge the parts off good with fifty per cent alcohol and dry them quickly. The alcohol will be very painful for a minute or two. After this apply a powder or ointment containing calomel 20 grains, bismuth sub-nitrate 1 dram, oxide of zinc 2 drams, white vaseline 1 ounce. This should be applied freely after the yellow scabs have been removed.

This line of treatment should be commenced as soon as the first sore develops. This will prevent its spreading to other parts of the face or hands.

Children often get this disease from playing with dogs and cats, also from old pieces of rotten wood or from digging in the dirt. It is a disease of filth, and care should be taken to prevents its spreading.

## Paragraph 935 HERNIA.

Hernia occurs very frequently in children, and in several different forms. Inguinal hernia occurs more frequently in boys; it is rarely seen in girls. Whooping cough, colic and constipation are some of the causes of hernia, and occasionally

it is congenital; that is, children are born with the hernia. In a boy, it often extends down into the scrotum, and the tumor becomes quite large.

If an inguinal hernia occurs, and does not go back in place, it is reduced by laying the child on its back, with the legs and buttocks considerably elevated, and with the thumb and second finger grasping the lower portion of the tumor and exerting pressure gently upward and outward; this will oftentimes be successful. When this cannot be accomplished a physician should be called, as he may have to give the child an anaesthetic before it can be reduced. The best treatment for an inguinal hernia is an operation.

When a truss is used, it is generally unsatisfactory, and oftentimes it irritates the body at some point of contact sufficient to cause an abscess. If for any reason an operation cannot be performed, a truss should be properly fitted. To effect a cure, a truss must be worn at least two years. In some selected cases, a properly fitted truss will effect cure.

#### Paragraph 936

UMBILICAL HERNIA. An umbilical hernia may be either congenital or acquired. However, we believe the vast majority of cases are congenital, and it is due to the failure of the umbilical opening to close, which gives way under the pressure, such as straining during whooping cough or in colic.

The diameter may vary from one-fourth inch to one inch, and the hernia may protrude as far as one and one-half inches. It is very common, and usually makes its appearance during the early months of life.

### Paragraph 937

TREATMENT. The treatment for umbilical hernia in infants is entirely mechanical. No operation is required in such cases. The most effective means is to bring together two folds of the skin over the umbilicus so that they may meet in a medium line; the two folds of the skin thus form a splint. Over this is placed a strip of Z.O. adhesive plaster one or

two inches wide; the length depending upon the size of the child. Strips are generally from four to six inches long. This method will prove to be the most satisfactory and effects more cures than any other. The habit of covering the opening with a button or any other form of a pad is not to be recommended, as it has a tendency to increase the opening. While it reduces the hernia, it prevents its rapid closure, and in place of making the parts stronger it makes them weaker.

Any mother or nurse can apply the adhesive plaster as above suggested after being shown once by a physician. The child may be bathed with the plaster in position, and every four or five days it can be changed. Sometimes the skin becomes irritated. When this is the case the folds of the skin can be changed and plaster applied at different angles; by so doing, the part of the skin that is irritated remains uncovered, and if the treatment is applied as soon as it is discovered a cure can be expected in from three to six months; the younger the child the more rapid will be the cure.

### Paragraph 938

VENTRAL HERNIA. This is a form of congenital hernia and we only see it in infants. It may occur with an umibilical hernia or it may be independent. The cause is possibly due to failure of the abdominal muscles to unite in the middle line or it may be due to a weakening of the muscular fibre. There is never any protrusion of the abdominal contents as we find in other forms of hernia.

In Ventral hernia we generally have a fullness or a distinct localized elevation of the skin over the site of the absent or weakened muscular tissue in the abdominal wall.

TREATMENT. Treatment consists of the application of a four-inch strip of Z.O. adhesive plaster about one and one-half to two inches wide, placed flat on the skin over the hernia. This treatment will have to be continued for several months. It is possible that such cases might require an operation but the adhesive plaster will generally effect a cure.

## Paragraph 939 CONSTIPATION.

Constipation in both infants and children is quite common, and is often more or less chronic. In young infants, the bowels should have at least one or two evacuations daily. Some only have one movement a day, yet seem to be perfectly well. As children grow older, and take more solid food, they suffer more as a rule with constipation than younger infants. Some children have three or four bowel movements a day, and yet they enjoy perfect health, and children who have only one movement a day are also perfectly well. These facts must be remembered when we consider constipation in children.

Muscular development and the peristaltic action of the intestines in infants and children are not as well developed as in the adult, and this is one of the causes why children are prone to constipation. We find constipation more frequently in infants who are artificially fed than we do in the breast fed, which is possibly due to insufficient amount of sugar and fat in the food, or the child does not get a sufficient amount of water.

When infants have stomach trouble, or when they have rickets, there is a lack of proper digestion, and a scanty amount of secretion in the intestinal tract, and less peristaltic action. These all result in constipation. You must also remember that boiled milk or sterilized milk will cause constipation.

Children who suffer with constipation have a loss of appetite and do not sleep well. Older children complain of headaches and pains in the stomach, associated with more or less gas in the bowels. When a case of constipation is suspected, there are several conditions, especially among children, that should be ascertained, and it would be well to consult a physician and be sure if it is a real case of constipation, or if there is some form of intestinal obstruction present. After it is a positive fact that we have a case of constipation to deal with, the treatment consists along the following lines.

#### TRAINING OF INFANTS AND CHILDREN

#### Paragraph 940

TREATMENT. In treating a case of constipation it must be remembered that no two cases can be treated exactly alike. What would secure one good bowel movement a day for one, would cause three or four movements in another case. The child's physical condition and general habits of living must all be taken into consideration when treating constipation in children. What should govern the treatment would be the frequency and character of the bowel movements.

At first, ascertain if the food is at fault, and if so, it should be corrected. For the immediate relief of constipation in infants, an injection of half a pint of Castile soap water is very effective, also the glycerine suppository or soap suppository may be used. When a case of constipation persists, there should be a regular time for the bowels to move, and a soap water injection should be given at that time, and should be continued for some time. No harm will result if the soapsuds enema is continued for several months.

In cases where the stools are very hard and dry, an injection of an ounce or two of warm sweet oil, and have it retained in the rectum over night, will often soften the hardened mass, and give better results the next morning when the soapsuds enema is given. Some cases require a higher colon irrigation in order to get a complete evacuation of the bowels. In that case, the soft rubber catheter must be inserted into the colon for several inches (four to six), and allow about six or eight ounces of warm water to enter the colon, in which has been dissolved a half a teaspoonful of inspissated ox-gall. The use of ox-gall is recommended only in cases which require a rapid and complete evacuation of the colon and rectum. Ox-gall is irritating and cannot be used continually, or too frequently in children.

### Paragraph 941

DRUGS FOR CONSTIPATION. Mothers, as well as nurses, should realize the fact that it is not wise to try to cure a case of constipation with drugs alone. It is very unsatisfactory to continue the

taking of cathartics each night, as is often practiced in adults, and the same is true of children.

Drugs should be only one part of the treatment.

For older children, who can swallow a pill, the anticonstipation pill (Waugh), made by the A.A. Co., is a very convenient and effective way to administer drugs. It is an excellent formula, and for older children it can be increased or decreased as required. In combination with other treatment, a sufficient number of pills should be given—say, one to three—to a child 12 or 14 years old, two or three times a day after meals (the best time would be the noon and evening meal), to produce one daily stool, and reduce the dose as results are secured.

Maltine with cascara is good. A teaspoonful given to older children once during the day, especially in the morning. Where children are fed large quantities of starchy foods, give calcined magnesia. For rickety children one-half to one teaspoonful of olive oil or cod liver oil may be ordered three or four times a day. Liquid Albolene (mineral oil), 1 or 2 teaspoonfuls two or three times a day is also recommended. In giving mineral oil, it is best given on a half a wine glass of real cold water, using the plain unflavored oil. This oil has no medicinal properties, and does not act as a cathartic, simply acts as a lubricant to the alimentary canal, and can be given indefinitely. For very young infants, a half teaspoonful of malt extract may be added to each feeding. One teaspoonful of Loefflund's malt soup may be added to the feeding, the same as the malt extract, and the dose may be increased or diminished as the case requires.

#### Paragraph 942

DIET FOR CONSTIPATION. In feeding infants and children suffering with constipation, a great deal of care and attention must be given to the diet, and at the same time adding different correctives to the food is important; thus Phillips' Milk of Magnesia, ½ to 1 teaspoonful given in the morning feeding, or it may require even more than that to obtain the desired results.

The method of heating the food, the milk supply, and the quantity of water given to infants, must be considered when treating a case of constipation. Instead of using plain water to dilute the milk, sometimes adding oatmeal water will help constipation. The milk may also be diluted with a 5 per cent solution of sugar of milk, which is an excellent corrective. Infants over a year old, suffering with constipation, should be given a small amount of oatmeal porridge containing a teaspoonful of butter or a teaspoonful of sugar of milk.

All starchy foods have a tendency to cause constipation, while fruits, like apple sauce, oranges and grapes, have a laxative effect. Prunes and Senna leaves stewed to a jelly in sugar and water are also valuable. In older children buttermilk is given. Very acid fruits should not be allowed. Care should be taken not to disturb a child's digestion by using the foods just mentioned in too large amounts, or giving them too frequently, or too many at a time. It is best to try one article and then another, and use the one most satisfactory in any given case. What agrees with one will not affect another. Rely largely on the diet, giving as small amount of drugs as possible. Louis Starr gives the following constipation diet list:

#### Paragraph 943

First Meal, 7 A.M.—A breakfastcupful of new milk, with an additional tablespoonful of cream; 2 to 4 tablespoonfuls of thoroughly cooked oatmeal or cracked wheat porridge, with cream and salt; 2 slices of whole wheat or bran bread, buttered; the juice of a ripe orange, or half of a moderate sized ripe apple scraped with a spoon, or a small ripe pear, scraped, or a peach.

Second Meal, 11 A.M.—A teacupful of milk, with an additional tablespoonful of cream; a slice of bran bread.

Third Meal, 2 P.M.—A breakfastcupful of mutton or chicken broth, or 1 or 2 tablespoonfuls of underdone roast mutton, beef, or chicken minced

fine and pounded to a paste; puree of spinach; mashed cauliflower tops; asparagus tips; stewed celery; whole wheat or bran bread, buttered; junket and cream; rice and milk pudding with stewed prune juice; baked apple with cream.

Fourth Meal, 6:30 P.M.—Milk, 1 or 2 break-fastcupfuls, with additional cream; whole wheat or bran bread, buttered, stewed fruit.

Older children are not fed so frequently, but they should be given regularly a glass of water, either hot or cold, an hour before breakfast. Add cream and water to their milk. Barley or oatmeal water may also be added to the milk. That is, to a glass of whole milk, add ½ ounce of cream and 2 or 3 ounces of barley water or oatmeal water. Meat broths are also laxative, and plenty of ripe fresh fruits, when taken before meals, are very serviceable. Figs and prunes stewed together are very helpful. Oatmeal or brown bread of any kind is better than white bread, and as a child grows older, the management will be similar to that for adults.

### Paragraph 944

Briefly, Holt says: "To treat a chronic case of constipation in a child four years of age, massage for eight minutes, night and morning; give the juice of half an orange and a glass of Vichy immediately upon rising; a breakfast of oatmeal, with one ounce of cream, dried bread with butter, an egg, a half glass of milk with cream and water added; a dinner of soup, one starchy vegetable, that is, potato with cream, and one green vegetable, beefsteak, baked apple or prunes, dried bread and butter, and water to drink; for supper, cream toast, egg, dried bread and butter or Graham crackers, half a glass of milk with cream and water added."

#### Paragraph 945

EXERCISE. Exercise for older children is very important. A child should have plenty of outdoor play and exercise. Let it romp and play to the point of fatigue. For older children, bicycle riding and

#### TRAINING OF INFANTS AND CHILDREN

horseback riding are to be recommended, but the exercise must not be carried too far, as over-indulgence in such exercise will frequently have very serious after effects. Limiting the amount of such play and exercise to an hour, once or twice a day, would seem to be sufficient.

In young children, who cannot take such exercise, massaging the abdomen will have a tendency to assist in the treatment of constipation. Rubbing the abdomen with the aid of any lubricant, like vaseline or olive oil, will be found serviceable. In older children, the use of the vibrator over the abdomen for a few minutes (say 10 minutes) will assist in stimulating the peristaltic action and tone up the muscles. This can be continued for a month at a time.

To massage the abdomen, the hands are gently placed on the lower right hand side of the abdomen, and gentle pressure should be made. Do not use sufficient force to cause the abdominal muscles to become tense. Commence each pressure gently, gradually becoming firmer; then after a firm pressure, apply a sort of a rotary movement. Continue this pressure or rotary motion method of massage up the right side of the abdomen, across to the left side and down to the right side. This massage may be continued morning and evening for ten minutes, for several weeks. When any improvement is noticed, then give the treatment less frequently. It may require several months to obtain satisfactory results.

As mentioned, there is a lack of muscular tone and peristaltic action in children, and the massage assists in stimulating this condition. Do not be disappointed if immediate results are not secured. In a case of chronic constipation, it requires six or eight months treatment before satisfactory results are secured. This is true in obstinate cases. To sum up the treatment of chronic constipation in a child four years of age, Holt says: 'Massage the abdomen as mentioned above, eight minutes night and morning.''

# Paragraph 946 CIRCUMCISION.

In most all cases the foreskin in the male infant is too long, or the opening is so small that it cannot be slipped back and forth over the gland. This condition, if left alone, causes extreme nervousness, bed wetting, and bad habits. In a very small percentage of cases the opening in the foreskin is of a fair size, and when it is properly stretched, and the adhesions broken up, and followed up with the necessary after care, circumcision may not be necessary. The after care consists of applying a 10 per cent boracic acid ointment to the parts night and morning, and slipping the foreskin back and forth over the gland at least twice a day, for a week or ten days.

In cases where the opening is small, or when the foreskin is too long, complete circumcision is absolutely necessary. This operation should be performed on the sixth or seventh day. No anaesthetic is required, and if done by a physician no harm ever results. The harm is done by allowing this constricted condition to remain; therefore, every parent should not hesitate to recommend, in fact demand, circumcision at the proper time, and save any future trouble.

The advantage of having circumcision performed during the puerperium is that the nurse can look after the case while the mother is in the hospital, and the attending physician can be consulted when necessary. If circumcision is not performed at the proper time, but left until later in life, it will require an anaesthetic, with additional cost and risk to the child.

# Paragraph 947 MASTURBATION.

This is not an uncommon habit of childhood, and it occurs in both male and female—more often in the male. The cause of masturbation may originate from any irritation applied to the genital tract; such as acid urine, which causes excoriation of the skin, or when the diaper is pinned too tight; and in

the case of boys, where there is irritation caused by an elongated and contracted foreskin. Also the accumulation of smegma around and about the clitoris may be the cause of masturbation. Frequently pin worms may wander into the vagina, and from there set up local irritation of the parts, resulting in masturbation.

Children who acquire the habit of masturbation may do so by rubbing the thighs together, or by placing their hands on the genitals. They often continue this practice until they become exhausted, and their face becomes flushed. Such children suffer from marked anaemia, loss of sleep, are irritable, peevish, and very sensitive. If continued, it affects their mentality, and in time destroys their mental functions, and the child becomes an imbecile, both mentally and physically; therefore, it is very necessary that mothers detect this habit, and see that the cause is removed at once. The results are generally good if taken in time and properly treated, yet some cases are very persistent in spite of everything that can be done, and require most heroic measures to effect a cure.

#### Paragraph 948

TREATMENT. The cause must be removed, and all irritation of the genitals treated. Boys should be circumcised, and see that there is no eczema or worms irritating the parts, and all vaginal discharges must be cured. Older children should be removed from bad company, and oftentimes it may be necessary to change the entire surroundings, in order that any treatment will be effective. The best hygienic surroundings should be established. Plenty of fresh air, clean habits, and daily baths are necessary. Ocean voyages are to be recommended, and the proper care, with the aid of a trained nurse, will often do as much, if not more, in such cases as medicine. When children once acquire this habit, they should never be allowed to sleep with their hands under cover. Circumcision should be performed when required, and is valuable in effecting a cure in boys. In girls, especially little girls, often breaking up the adhesions about the clitoris and

cleansing the parts will modify, if not cure, the habit. In girls, when this does not effect a cure, then a radical operation of removing the clitoris is to be recommended, and may be required.

## Paragraph 949

## LEUCORRHEA IN CHILDREN.

In young girls, even in infancy, there quite often occurs a profuse leucorrhea discharge. The mother or nurse who knows this fact may be saved a great deal of unnecessary anxiety. It is generally an evidence of low vitality. Sometimes it is caused by pin-worms that find their way into the passage from the bowels. Sometimes the infection is specific, gonorrhea in origin. It is a serious matter and decidedly contagious. A child may take the infection from towels that have been used by a person who has gonorrhea.

## Paragraph 950

TREATMENT. In the former condition, when it is simply a case of leucorrhea, the treatment consists of great cleanliness; washing the parts with boracic acid solution, and using a soft rubber catheter and funnel to give a vaginal douche with. A non-irritant antiseptic like Chlorazine, in strength 1-10,000, may be used. If the external parts become irritated, oxide of zinc ointment should be applied, and a piece of lint, or fold of gauze should be laid between the labia, in order to keep them separated, and allay the inflammation. When a case does not respond to treatment as outlined, you had better consult your physician.

# Paragraph 951 ERYSIPELAS.

Erysipelas is a common infectious disease affecting infants, children and adults. It is usually fatal in about fifty per cent of the cases in children under one year of age. The reason that it is fatal in young children is because of the interference with nutrition, long continued high temperature, discomfort from the inflammation, and loss of proper rest. The action of the toxaemia in

## TRAINING OF INFANTS AND CHILDREN

the system causes such a low vitality that if it does survive the acute stage, it is very apt to die later from exhaustion.

Erysipelas is characterized by a reddened, slightly swollen condition of the skin, which has a distinct line of demarcation; that is, the inflammatory condition extends over new tissue, and you can see plainly how far the infection has extended by a distinct line where the inflammatory condition and normal tissue meet. It may start on any part of the body, but it is generally on the face and often extends over the forehead and scalp, extending down the back and around the neck. The skin has a very distinct inflammatory appearance.

#### Paragraph 952

NURSING TREATMENT. Nursing treatment, and the treatment in general, in young children is very uncertain, and for that reason the younger the child, the graver the prognosis. There is but little hope of recovery in such cases, and the favorable termination of the case depends upon the extent of the resistance of the patient and the severity of the infection.

One of the most important features in the treatment is to give the patient plenty of fresh air. The windows should be wide open continually. Keep the child warm with clothing and hot water bottles. Mother and nurse should bear in mind that children suffering with erysipelas are liable to have more or less stomach and bowel trouble; especially is this true of bottle fed babies. In such cases, the food should be reduced fifty to seventy-five per cent by the addition of barley water. This will not increase the amount of liquid taken, but would reduce the amount of food.

During the entire attack, and throughout convalescence, the child should be fed only to the limit of its digestive capacity--never beyond it. Mothers and nurses should make frequent inspection of the stools in order to determine the condition of the stomach and bowels.

The local applications used in erysipelas are various strengths of Ichthyol, from five to thirty per cent. Another preparation which is often used is a saturated solution of Potassium Permanganate.

Sometimes in infants the inflammation extends over a large area, and in that case, care must be taken not to cover too large a surface of a small child, as it interferes with the functions of the skin, and may become a serious matter. As the disease advances, the lotions are applied and followed up the extension of the inflammation.

## Paragraph 953

#### EPILEPSY.

In considering this disease, which is not very common among children, the symptoms and conditions that are present during the attacks are sufficiently known, and they need not be repeated in connection with this article.

#### Paragraph 954

NURSING TREATMENT: A case of epilepsy should be placed under the best hygienic surroundings that is permitted by the patient's station in life. They should have plenty of outdoor life. Sports and games are enjoyed, but not to the point of fatigue; always keep within the lines of moderation. The child should sleep in a cool well ventilated room at all seasons of the year. If attending school, the child should receive instruction at home, and the sessions at school made short and studies easy; mental fatigue should be guarded against.

The social part of a child's life should be managed with a great deal of care. Theater going , and exciting amusements are forbidden, especially if the plays are of an emotional and exciting nature.

A diet suitable for the child's age should be given, consisting of the most nutritious and easily digested foods, just the same as for a normal child. Meat should be given only once a day. Careful attention to the diet and bowels are the most important features in the nursing treatment. An epileptic

patient should not pass over twenty-four hours without an evacuation of the bowels. Mothers and nurses will add greatly to the child's comfort if a copious enema is given quite often—every second or third day at least. If there is any tendency towards constipation, the same treatment should be employed as recommended in chronic constipation.

The importance of a correct diet, care of the bowels, habits, and hygienic surroundings cannot be over-estimated in assisting to diminish the frequency and severity of the attacks. To those who are unable to give the patient suitable attention and care at home, we recommend that they place the patient in some institution devoted exclusively to the care of epileptics.

If any of the readers of 'Lectures of Interest to Women' should be so unfortunate as to have an epileptic in their family, we will be only too glad to send them our advice and knowledge in regard to medical treatment if they will enclose a stamped self-addressed envelope. We believe that our suggestions along this line would be worth the asking.

#### Paragraph 955

#### INFANTILE PARALYSIS.

Infantile paralysis is a disease that affects the spinal cord. It is highly contagious and has occurred quite frequently throughout this country and increased with great rapidity within the last ten years. Children that recover from an attack are invariably left hopeless paralytics and deformed, oftentimes rendered helpless, and a constant care upon their parents.

All children are affected alike, the healthy as well as the sickly. It is essentially a disease of childhood. The symptoms of infantile paralysis show themselves without any warning. It may be a single case and the only one in the community. The child will suddenly complain of headache, fever, nausea and vomiting. There is often a rigidity of the muscles of the neck and spine, and pains radiating in the arms and legs. Paralysis occurs any

time within six days after the attack begins, and involves the legs and upper part of the body. In some cases the paralysis clears up after recovery. As a rule though, it leaves its after effects, as mentioned above. The paralysis is a result of the poison affecting the brain, spinal cord and nerves of the muscles. When the child is exposed to infantile paralysis, and it becomes infected, it will show symptoms of the disease any time between the second and tenth day.

#### Paragraph 956

NURSING TREATMENT: During the acute stage the child should be kept quiet in bed, and bowels should be kept regular. Light, easily digested nourishment should be given and the patient made generally comfortable. The child should be kept away from other children or members of the family. When contagious hospitals are accessible, the case should be sent to the hospital, in order to prevent other members of the family from becoming infected. It is extremely contagious; therefore, mother, nurse and physician should realize this fact and take every precaution not to spread the infection.

All the discharges from the patient must be thoroughly disinfected with some good antiseptic. Chloride of lime solution (one-half pound to two gallons of water) is a good solution to use. All the bed linen, clothing, and dishes must be dipped into this solution before being removed from the room It is a good precaution to hang sheets dipped in the bichloride solution (1-2000) over the door.

The don'ts are important and should be faithfully executed by the mother, nurse and physician. Don't allow family pets to remain in the house. Don't allow anyone in the sick room but the physician, nurse or attendant. Don't allow any insects to remain alive in the room.

There is no disease in childhood in which so little hope is to be held out for the patient. Sometimes they recover and are left invalids the rest of their lives. The mortality varies from sixty to ninety per cent.

## Paragraph 957 EMOTIONAL INSANITY.

This subject means so much, in relation to parents and children, that it is impossible to give it justice in 'Lectures of Interest to Women,' on account of space, but let us briefly note the results that come from emotional insanity. Many, many times it is the cause of a nervous breakdown, which ends in a ruined life.

We have said that infants are little creatures of habit, wonderful imitators, and sensitive of their surroundings. The mother feeds her baby improperly; gives it too much food or not enough; lets it nurse too long; gives it a pacifier; lets it suck its thumb; anything to give her a little immediate peace, and not disturb the neighbors in the flat above. Such small beginnings are the start of serious conditions that develop later in the way of digestive disorders, nervousness, hysterical vomiting, biting the fingernails, etc., and such conditions may start the little one on the road to serious nervous and mental disturbances, the real origin of which is not recognized by the parent.

In a fit of emotional insanity, the father punishes the child beyond reason, and it is often transmitted to the child in a way that will have its lasting effect. We often see emotional insanity developed in a small child, and it becomes vicious, takes things from brother or sister, tells little lies, tries to slap the parents, gets in the habit of running away, seemingly to free himself of unpleasant surroundings. Let a child be over-punished, and if it is naturally of a sensitive disposition, it may be the beginning of its downfall. This nervous condition and vicious disposition may be the cause of leading it to acts of all sorts of immorality, or the child may land in the insane asylum. Take the history of all criminals and murderers, and analyze their history, going back to their childhood, and see for yourself the emotional insanity that surrounded their lives during childhood.

Mark you, the child itself tends to give back just what it gets. We see emotional insanity in

children where the parents show no love for each other, and the child never sees any real affection between them, but it does see and hear the mother say harsh words, slam the door and leave the room, after having had words with the father, while she is in a fit of emotional insanity. These burdens the child must bear, and it means only a nervous and mental breakdown in the end. Parents should realize this; note their liability to emotional insanity and control it, and not allow it to be imparted into the life of the boy and girl whom they have brought into this world. If they do not realize this fact, the end of the chapter in the "Book of Life" may be the development of a nervous breakdown, so serious, perhaps, as to result in criminals or insanity.

#### Paragraph 958

## ELECTRIC SHOCK.

In treating an electric shock, the first thing to do is to call a physician. Accidental electric shock does not usually kill a patient at once; only stuns him and stops the breathing. The hope of saving the victim lies in the prompt and continued use of artificial respiration.

See that there are no foreign bodies in the mouth. If there are any, quickly remove them with the fingers. Do not stop to loosen the patient's clothing, as every moment of delay is serious. Lay the patient on his stomach, with arms extended as straight forward as possible, with face on one side, so that the nose and mouth are free for breathing. Draw out the patient's tongue, which is best done by an assistant. If there are any burnt places, lay the patient, if possible, so that none of them are pressed upon.

Now straddle the patient's thighs, facing his head; put the palms of your hands on the muscles of the small of the back, with thumbs nearly touching each other, and fingers spread over the lowest ribs. With the arms held straight, swing forward slowly, so that the weight of your body is gradually brought to bear on the patient. This must not be violent, but should take from two to three seconds. The lower

part of the chest and also the abdomen are compressed, and the air is forced out of the lungs.

Now immediately swing backward so as to remove the pressure, but leave your hands in place, thus returning to normal position. The chest walls expand, and the lungs are thus supplied with fresh air. After two seconds swing forward again. Thus repeat twelve to fifteen times a minute, the double movement of compression and release—a complete respiration in four or five seconds. Follow the natural rate of your own breathing, swinging forward with each expiration, and backward with each inspiration. While this is being done, an assistant should loosen any tight clothing about the patient's neck, chest or waist.

In serious cases, continue artificial respiration without interruption for two hours or longer, until natural breathing is restored, or until the physician arrives. After natural breathing begins, carefully watch that it continues. If it stops, start artificial respiration again. During the period of operation, keep the patient warm by applying a proper covering, and by laying beside the body rubber bags filled with warm water. To keep the patient warm should be the duty of the assistant. Do not give any liquids whatever by mouth until the patient is fully conscious.

When normal respiration has been restored, the burns, if serious, should be attended to until the doctor comes. A raw or blistered surface should be protected from the air. If clothing sticks to the skin, do not peel it off, but cut around it. The adherent cloth, or a dressing of common soft material, is applied to the burned surface, saturated with picric acid (0.5 per cent). If this cannot be obtained, use a solution of baking soda (1 teaspoonful to a pint of water), or the wound may be coated with a paste of flour and water. Unguentine may also be used, or it may be protected with a plain vaseline. Cover the burn with gauze, clean waste, clean handkerchief or other soft cloth, held tightly in place by a bandage. The same covering should be lightly bandaged over a dry burn, but

without wetting or applying oil to it. Do not open blisters.

The victim must be separated from the live conductor quickly, but in doing so, you must avoid receiving a shock yourself. Many persons have received vital injury by trying to disconnect victims of shock from live conductors. One should observe the following directions: If a child, or any member of the family, should be connected with a live conductor, use a dry coat, a dry rope, a dry stick or board, or any other dry non-conductor, to move either the victim or the wire, so as to break the electric contact. Never use metal or any moist material. The victim's loose clothing, if dry, may be used to pull him away. Be careful and do not touch the heels of his shoes while he remains in contact with the wire, on account of the nails. If the patient's body must be touched by your hands, the hands should be covered with rubber gloves, or stand on a dry board or some other dry insulating surface. If possible, use only one hand.

If the patient is lying on the ground, clutching the wire, either shut off the current, lift him off the ground, or cut the wire. This releases his grasp. Opening the nearest switch is the quickest way to break the current. To lift the patient off the ground is often difficult.

If an accident should occur about the house, with children, immediately open all the switches. If necessary to cut a live wire, use an axe or hatchet with dry wooden handle.

Great care should be taken to observe the above suggestions, and the patient should be removed from the live conductor, and artificial respiration should be employed as recommended, regardless of the fact that the victim appears dead. Remember the importance of immediate and faithful application of artificial respiration in order to save the patient suffering from electric shock.

## Paragraph 959 GAS ASPHYXIA.

Every mother and nurse should be thoroughly familiar with the method of treating such cases. It

is a condition that often occurs, as gas occasionally escapes from leaks in the pipes, when the gas is not turned off properly, or it may be used with suicidal intent.

To treat a person suffering from illuminating gas, would require effervescent phosphate of soda, aromatic spirits of ammonia, one bottle ordinary ammonia, drinking vessel of some kind, a pair of tongue forceps, a small wooden mouth gag, and a towel.

Patients are affected to various degrees, some only slightly, others unconscious but still breathing, and those that are apparently dead and not breathing.

#### Paragraph 960

TREATMENT: The patient should be moved to where he will get fresh air, loosen the clothing and, if he is able, keep him walking around. If he can swallow give him a dose of effervescent phosphate of soda in a glass of water; follow this in five or ten minutes with one-half a teaspoonful of aromatic spirits of ammonia in two-thirds of a glass of water. Give the spirits of ammonia every fifteen minutes for four doses. Keep the patient awake and walking around.

When the patient is unconscious, or partly unconscious, place him in the fresh air, loosen the clothing and put a roll under the shoulders and neck. Have the roll made out of an old coat or blanket, and it should be large enough to cause the head to fall backwards. Rub the arms and legs toward the body. If he is able to swallow give the patient one-half teaspoonful of aromatic spirits of ammonia every fifteen minutes for four doses.

When the patient is unconscious, open jaw and insert a mouth gag or block of wood, or anything to keep the teeth apart. Grasp the tongue with tongue forceps and remove all mucous from the mouth. Take the stronger ammonia, and it is good to have a sponge in the bottle in place of the cork, and pass it under the patient's nose about once a minute as the patient breathes in.

Perform artificial respiration by pressing on the ribs every time the breath goes out. Continue this treatment until the patient is conscious and able to breathe for himself. After he is conscious give the patient one-half a teaspoonful of aromatic spirits of ammonia in one-third of a glass of water.

Keep the patient perfectly warm with hot water bottles and plenty of clothing. Place his head upon a pillow and remove the roll from under the shoulders.

If the patient is not breathing or unconscious, you will rub the limbs toward the body. Open the mouth, insert the mouth gag and grasp the tongue with the tongue forceps and pull it forward, or grasp the tongue between the thumb and fingers, covering them first with a towel. Clear the mouth and place the patient on his back with the head turned to one side. Pass the ammonia bottle under the patient's nose once a minute and employ artificial respiration. Kneel across the patient's back and place your hand over his ribs in such a way that the thumbs will extend about six inches below the arm pits. Then swing your body forward so as to allow your weight to fall vertically upon your wrists. In this way compress the chest wall, then swing forward in an upright position, releasing this pressure. Repeat this about twelve times a minute. Use no more force than is necessary to cause a deep expiration. This can be determined by the sound made by the air escaping from a patient's nose and mouth. Care should be taken not to overdo or to be too violent in giving artificial respiration by this method.

As soon as the patient begins to breathe and is able to continue, stop artificial respiration and place the patient on his back and press the sides every time he breathes out. This should be continued until he is able to breathe naturally without assistance.

After the patient has been revived surround him with hot water bottles, hot bricks or bottles filled with hot water—anything to keep him warm and keep the patient well covered with a coat, comfort or anything at hand.

In performing artificial respiration do not be discouraged if the patient shows no sign of breathing, continue the motions regularly at least an hour. While doing this secure such help and give such directions as needed to assist you, keep working, do not tire, because faithful persistence in artificial respiration in such cases has saved many a life.

When the patient is unconscious or not breathing it is advisable to send for a physician, but in the meantime devote every effort to reviving the patient by following out the above instructions.

# Paragraph 961 DROWNING.

Drowning is an accident for which every mother ought to be prepared to treat. There is no time to send for medical aid, so an effort must be made to revive the patient if there is the slightest chance of doing any good. As soon as the child is taken out of the water, all clothing should be loosened about the neck; lay the child with face downward for a second or two until the water runs out of the mouth. It should then be laid on its back, with the shoulders slightly raised, and a folded coat or garment of some kind placed under them, with the head just touching the ground. Grasp the tongue with the thumb and index finger (covered with a handkerchief or cloth), have it drawn well out of the mouth, and keep in this position.

Artificial respiration should be commenced at once; 'Sylvester's method,' is the one generally used, and it is performed by kneeling behind the unconscious child; seizing the arms and swinging them around horizontally, close to the ground until they meet above the head, pulling upon the arms quite strongly while they are in that position. This position is intended to expand the chest and make the air enter it.

The arms should be in this position about two or three seconds, then they are brought to the sides of the chest, and given a forcible push against the lower ribs. This maneuver lasts only about one second. The object is to expel the air from the lungs. The air should be forced in and out of the lungs 18 to 20 times per minute. The movement should be kept up for a long time; often as long as a couple of hours, until it is absolutely certain that there is no heart action; that it has ceased to beat. Do not let the pulse be a guide as to when to stop artificial respiration.

While artificial respiration is being performed, someone should remove the wet clothing, dry the body, and apply warmth in any form--hot blankets, hot water bottles, hot stones, hot sand, or anything at hand. The limbs should be rubbed towards the body, in order to increase the circulation of the blood.

When breathing begins, artificial respiration must be continued to keep time with the breathing, in order to give the patient all the help possible.

Inhalation of smelling salts, ammonia or amyl nitrite, or slapping the face with wet cloths, will also aid respiration. The child should be given stimulants as soon as it can swallow. Do not move the child until it has fully recovered, unless the weather is such as to necessitate its being moved. Remember to keep the child warm.

NOTE: Any mother who is not familiar with the movements of artificial respiration should receive special instructions, and practice upon a living subject, until she is thoroughly familiar with the movements, and can make them to correspond with the living subject.

The 'lung-motor' is of great value in these cases and when an instrument can be secured, it should be used. Every mother or nurse should be instructed how to operate a lung-motor.

#### Paragraph 962

ST. VITUS'S DANCE OR CHOREA.

St. Vitus's dance is a nervous condition which is generally seen in children. There is an irregular jerky movement of the arms and legs. The

disease often begins with the child dropping its food at the table; appears to be awkward in walking and handling different articles; falls frequently and trips over things. The disease may be so severe that the child will be unable to feed or dress itself, and will not be able to walk or talk.

The causes are anything that will produce an over-strain of the nervous system; such as, fright or overwork. It is often seen in children who are affected with rheumatism. Some authors state that the two diseases are so closely associated with each other that it is impossible to separate them, and many authors have agreed upon the fact that association between chorea and rheumatism is a most intimate one. About 80 per cent of all cases of St. Vitus's dance can be associated with rheumatism directly or indirectly. If they have not had it themselves, possibly the parents have had it. The greatest danger is that the heart may be affected following the disease.

#### Paragraph 963

NURSING TREATMENT. The care and management of a child suffering with St. Vitus's dance depends upon the degree and severity of the attack. In very bad cases, the child should remain in bed for three or four weeks; and in a very mild case, such a rest might do harm.

The guide to go by is when the child cannot feed itself, and a rest in bed for a week or two is strongly advised. A mental rest is absolutely necessary, and oftentimes this can be obtained in bed better than any other way, but if mental excitement can be eliminated, and the child have an outdoor life and exercise, so much the better.

One important point in the care of such a case, is for the mother and nurse to see that the child never becomes fatigued, either physically or mentally.

When a child has been confined in bed for some time, it should return gradually to its regular habits. Allow it to be up for only a half hour

the first day, an hour the second day, and so on until it returns to its usual habits of living.

Never allow a child suffering with St. Vitus's dance to attend school; no matter how mild the attack. In some cases, in order for the child to have the needed rest, it is often necessary to remove the child from its home and place it among relatives, with a different environment. Cases that are so severe that they are often in bed, should be made to rest for two hours every day after dinner (which should be the noon meal).

#### Paragraph 964

The diet in such cases should be anti-rheu-matic, and every case should be cared for and treated the same as if it were a rheumatic patient. Great care should be taken in giving anti-rheumatic medicine, as this interferes with the appetite and digestion. It is best to treat a child for five days and then let it rest for the same length of time. The child must be treated for the nervous condition as well as the rheumatic condition, because treating the rheumatism alone will not effect a cure.

#### Paragraph 965

Arsenic in some form is generally given in addition to the remedies for rheumatism. Fowler's solution is the one of choice. Mothers and nurses, in giving Fowler's solution, should note that when the child has pains in the abdomen, diarrhea, foul breath, vomiting, and puffiness under the eyes, it should be discontinued for two or three days. In that case, when beginning to give it again, start with the minimum dose, and increase as before. Some children can take only small doses of arsenic; this should be remembered by mothers who have the care and treatment of such cases. Many children cannot take more than four or five drops of Fowler's solution three times a day. The prescribing of the rheumatic remedies and arsenic should be done by a physician.

The way arsenic is generally given, is to increase the dose one drop every twenty-four hours; starting with one or two drops at the first dose,

and it is given three times a day after meals. The combination with the rheumatic treatment is rarely given in larger doses than 10 to 12 drops, and when it is necessary to stop the treatment, the dose is reduced one drop each day. As soon as the case improves, the medication should be gradually withdrawn, and after the symptoms have disappeared, the restricted diet should be continued for some time.

Every mother should bear in mind that when a child has rheumatism or chorea, it is susceptible to recurrent attacks, and she should take her child to a physician whenever she notices involuntary muscular twitching. Children that have had rheumatism and chorea should only be allowed meat once every second day, and but very little sugar and sweets; allow no candy.

As a preventive to another attack, give a child six years old, three grains of bicarbonate of soda three times a day for five days; then omit it for ten days, and repeat. By regulating the diet, giving the bicarbonate of soda solution, keeping the child out of school and very quiet, and sufficient outdoor life, the recurrence will, in all probability, be prevented.

# Paragraph 966 MENINGITIS.

Meningitis is an acute infectious disease that affects the covering of the brain, the brain tissue and the spinal cord. It often occurs in epidemic form, and several children in one family will become affected, or possibly only one person in the family. It is very acute and may terminate fatally in a few hours. The child may appear in perfect health, and suddenly be taken with dizziness, vomiting, and severe headaches at the back of the head, with high fever. The child may become drowsy or even delirious. After this condition lasts for a few hours, or days, the patient passes into a stupor and delirium, with the head thrown back, and the muscles of the back more or less rigid. Such a condition is a full picture of the disease. It may be very mild or severe.

Temperature may reach from 105 to normal or sub-normal, and while the temperature is normal, the child plays and seems to be in fairly good health. When the temperature rises again, the child complains of headache and drowsiness. It is irritable and rejects nourishment. The typical signs of meningitis are not always present in every case.

## Paragraph 967

NURSING TREATMENT: The most that can be done for meningitis is to nourish the patient and lessen his discomfort. Warm packs or bath at 105 degrees Fahrenheit will help to lessen the cerebral blood pressure, and the child should not remain in the bath longer than three minutes. The hot pack is the best and the most successful. Blankets are wrung out of water at 110 degrees Fahrenheit and wrapped around the child's body from the waist down. These hot packs may be repeated every half hour for three hours; then after a period of rest for two hours they may be repeated again every half hour for three hours.

To give children, suffering with meningitis, the proper amount of nourishment is quite a problem because the child may refuse the food, or it may not be able to swallow. The best way to administer food in such cases is by the stomach tube or gavage and this should be employed when other means fail. The younger the child, the greater the success you will have with forced feeding. Every six hours is often enough to give nourishment.

Completely peptonized whole milk is usually given in quantities suitable for the age. If the child will not take nourishment after food has been administered in this way, the gavage may be kept up indefinitely.

#### Paragraph 968

The general nursing, keeping the patient as quiet as possible, seeing that the bowels keep regular, together with the administration of the medicines as prescribed by the physician, is about all that can be accomplished in the treatment and care of meningitis.

After a case has recovered, the Board of Health will thoroughly disinfect the room. Remember that everyone connected with the case must strictly obey the rules of quarantine in order to prevent the spread of this frightfully contagious disease.

After ten days or two weeks have passed, and the child is making a satisfactory recovery, our efforts should be directed towards maintaining the nutrition of the affected muscles. Electricity is of value in stimulating the muscles, but someone who is familiar with the action of the Faradic or the Galvanic current should administer the treatment, and the ordinary shop batteries should not be used promiscuously.

Someone skilled in massage should give the affected parts a thorough treatment each day. When it is impossible to obtain such services, the mother or nurse will give some relief to the affected muscles by kneading and rubbing them. Splints and braces should be used as needed.

NOTE—The drug treatment for this class of cases has accomplished but little, and we question if the drugs that are generally prescribed do not do more harm than good in the way of annoyance to the child. Local applications, such as blisters or ice packs to the spine, give the patient the same irritation. Medicine that is taken internally often causes indigestion and impairs nutrition. Good nursing is of as much value as the administration of drugs. The only thing that we can hope for, in regard to a case under your care, is that the infection is mild and will not terminate seriously, and that the patient will make a complete recovery.

#### Paragraph 969

#### STAMMERING AND STUTTERING.

Stammering applies to the affection of speech when the child is scarcely able to pronounce words at all. Stuttering is that in which the child makes sounds, the repetition of the consonant at the beginning of a word; such as, c-c-c-cat. Both conditions are caused by nervousness. It occurs

more frequently in boys than in girls. Some authors believe that it is sometimes hereditary. It becomes persistent after five or six years of age. Up to that age it is generally transitory, and lasts only a short time during some disturbance of the nervous system.

### Paragraph 970

TREATMENT. To relieve the nervous condition, and instruct the child how to talk properly, is the line of treatment that is most effective. Teach the child, when it begins to talk, to say its words slowly and to pronounce them distinctly. A child who is in the habit of stammering must not associate with anyone affected with the same habit, on account of a child's wonderful power of imitation. It should be kept in the best of health, free from all nervous excitement, and never allowed to talk when in a hurry.

Scolding the child for this defect in speech is wrong, and will accomplish nothing. Several times during the day have the child take deep breaths, holding them for a few seconds, then letting them out slowly. This gives the child control over respirations, which will be of great help in correct pronunciation.

The child who stammers should be instructed to take a full breath before beginning a sentence. It should be taught to utter the vowel sounds slowly and without hesitation—first in a whisper and then out loud. When syllables, words, and then sentences are pronounced in a slow rhythmical way—that is, when children sing or recite in concert—stammering is not very likely to occur. When a child makes a mistake, it is best to have it stop at once and repeat it slowly.

The treatment and cure of stammering requires continuous and careful watching. It also requires a great deal of patience on the part of the mother, and recovery is generally slow. When possible, it is always recommended to send such children to some good institution especially maintained and operated for the cure of stammering.

#### Paragraph 971

SELECTION AND CARE OF THE SICKROOM

The room should be large, airy, light and pleasant. It should be as quiet as possible.

The ordinary bedroom, without too much furniture and hangings, is convenient for ordinary sickness, but when there are any of the contagious diseases to be cared for the room should be stripped bare of all hangings, carpets and upholstery. The furniture should consist of a light bedstead, one chair and a table.

Clean the walls and woodwork by wiping with a wet cloth wrung out of bichloride solution (1-4000). Keep all sick-rooms at a temperature of 70 degrees.

Avoid sweeping. If only a mild case of sickness and there is carpet on the floor, clean with a carpet sweeper or vacuum cleaner. In acute infectious diseases scrub the floor or wipe it up with a damp cloth—do not use a broom. Never dust the room with a brush; always use a damp cloth with a disinfectant solution. Dissolve one tablet of chlorazine in a quart of water for the walls and furniture. In all cases of sickness let in all the direct sunlight possible, unless the rays are too bright for the patient's eyes.

#### Paragraph 972

Bedding, in all cases of sickness, should be changed frequently. In cases of contagious diseases put the soiled bed clothes into a tub or pail containing a disinfectant solution. Chlorazine solution is a good one to use for this purpose.

Towels, napkins and bandages should always be clean. They should be taken from the room and disinfected and thoroughly boiled after each time they are used. All dishes, cups, glasses, spoons, and utensils that have been used in the sickroom, should be disinfected before they are taken out. When the sickness is a contagious infectious disease, they should be placed in the chlorazine solution and then scalded with hot water. Toys, shears, vases, combs. brushes, or anything that has come near the patient

suffering with contagious disease, should be left in the room and disinfected with formaldehyde when the case has recovered, or they should be destroyed by burning. In all contagious diseases it is well to consider that everything carried into the sickroom has become infected and needs disinfecting before being used elsewhere.

#### Paragraph 973

All foods should be brought into the sickroom just before the patient is ready to eat it. All unused articles of food should be burned or mixed with a disinfectant, bichloride (1-2000). No foods should be allowed to remain in the sickroom. Any food that has been in the sickroom, must not be used by others, or fed to the dogs or cats.

All the body discharges from the sick should be considered dangerous, and great care must be taken to avoid infection from the discharges. Such discharges include sputum, stools and urine and discharges from the nose. All discharges from the bowels and kidneys should immediately be covered with a disinfectant solution, and vessels containing the discharge and disinfectants, after standing for half an hour, should be thrown into the watercloset. Vessels containing the discharges should be thoroughly cleansed with boiling water and a disinfectant bichloride (1-2000). If there is no sewer connection they should be buried in the ground. Care should be taken never to throw them where they might contaminate running streams. A sputum cup should be used, or old papers, and they should be burned.

Every patient should have a sponge bath regularly, at least once a day, followed by an alcohol rub, and change the clothing at the same time when this is possible.

Persons taking care of the patient should not sit on the bed or lean against the bed, walls or furniture. They should wash their hands with antiseptic soap (tincture of green soap) after each contact with the patient.

Every attendant upon the sick must secure sufficient rest, because no one can do good work in caring for a sick person if they, themselves, are not in perfect health in both body and mind. They should be in an active, cheerful condition and care and anxiety must be dismissed from the sickroom, if possible.

Nurses should wear washable dresses which should be changed frequently.

The nurse should also be careful not to breathe the sick person's breath. Mothers should be careful about kissing their sick children or whispering to them with her face close to the patient. They should avoid taking the patient's breath into their own lungs.

The attendants upon the sick should not go into the sickroom with an empty stomach, neither should they eat or drink in the sickroom.

The mother or nurse should keep her hands free from all discharges from the sick. If the hands become accidentally contaminated, wash them at once with green soap. Be careful never to touch the patient if your hands are scratched, or have any sores on them or the skin is broken in any way. Also be careful in eruptive contagious diseases, like smallpox or scarlet fever, not to come in contact with the scales or scabs of the skin. See that all insects are driven out of the sickroom. Kill or destroy all flies or mosquitoes.

Now if the above simple rules are thoroughly complied with, the patient will have the best chance of recovery, and the nurse or mother will prevent infection from spreading to other members of the family.

## Paragraph 974

### FUMIGATION.

To fumigate a room after an acute infectious, contagious disease, or sickness of any kind where it is desired to destroy disease germs, insects or vermin, the best preparations to use are formaldehyde and sulphur dioxide. The formaldehyde is best for destroying germs, and the sulphur mixture is

best for killing insects. The formaldehyde should be used by itself in moist warm air, and the sulphur by itself in dry air. To make it effective, good fumigators are necessary. The formaldehyde and sulphur fumigators made and furnished by Bauer & Black are good ones; full instructions accompany each outfit. Johnson & Johnson also supply an excellent outfit, known as Lister's Fumigators.

When preparing the room that is to be fumigated with formaldehyde, cracks around the doors and windows should be made as tight as possible; flues should be closed; all drawers, closets and bookcases should be opened, and the bed clothes should be spread out, or hung up so as to expose them as fully as possible to the disinfecting gas; all toys and playthings used by the child should be placed in the open. The temperature of the room should be about 70 degrees F. and the air moist. Before fumigation begins, it is well to boil a little water to make the air moist. In all cases sprinkle the floor well with water before starting fumigation. The right amount of formaldehyde to use is one ounce per thousand feet of air space. Formaldehyde will not have any bad effects on the furniture or anything else in the room.

The air in a room to be fumigated with sulphur. to kill insects, should be dry, and the drier it is the less injurious the sulphur will be to clothing and furniture. It requires one pound of sulphur to fumigate a thousand cubic feet of space. This will kill flies and mosquitoes within two hours; two one-pound fumigators should kill rats within four hours. The one-pound fumigator is about the amount required for a room 10x12 and of average height. If the room is perfectly dry, very little injury will be done to the ordinary room furnishings. Sulhpur has a tendency to injure fabrics and furnishings in the room, but the injury will be less if the room is perfectly dry. Metal fixtures should be given a thin coating of vaseline; delicately colored fabrics, or any plants, should be removed from the room. Plants should be removed whether using sulphur or formaldehyde.

When it is necessary to fumigate a room, it should be done thoroughly and properly. It pays to take no chances in matters of this kind, because it means making the room, in which a patient with infectious disease has occupied, safe for others to use. The time required to fumigate a room, either with formaldehyde or sulphur, is about twelve hours; that is, the fumigation is generally made in the evening, and the room opened up the next morning.

# Paragraph 975 ABORTION.

By the term 'abortion,' we mean the death of the foetus before the end of the third month. It is a very common occurrence, because statistics show that fifty per cent of the married women have one or more abortion. The cause in every case cannot be definitely given. Diseases that lead to an unhealthy condition of the lining membrane of the uterus is one cause; displacement of the uterus, or female diseases in general, are other causes. Such constitutional diseases as syphilis, lead and gas poisoning, occasionally cause abortion; also diseases of the heart, liver and kidneys will cause an abortion.

The first sign that an abortion is liable to occur, and one that a woman would notice, is a hemorrhage, especially when followed by irregular intermittent uterine contractions. They are similar to labor pains, being expulsive, and cause the ovum to be expelled. As soon as the hemorrhage and pains begin, the patient should go to bed immediately and keep perfectly quiet. If blood clots are passed, they should be saved for the physician's examination. By going to bed and keeping quiet, a threatened abortion may often be avoided.

#### Paragraph 976

NURSING TREATMENT: As a rule, women, when having an abortion or miscarriage, treat the case indifferently, and do not consider it serious. Here a great mistake is made, as the ill health of many a patient can be dated from the time she had an abortion. She should have the same care and

treatment as if it had been a full time child. She should remain in bed until the discharge has ceased.

The after care is practically the same as we give to the lying-in patient. She should be kept scrupulously clean. All pads should be thoroughly sterilized, and special attention should be given to the diet, sleep and ventilation of the room. Never give a douche in such cases, unless ordered by the physician. Unless abortion has been very complete, it is always necessary that a woman should have a currettement. This is a safeguard in all cases. It is very important, and should not be neglected.

In treating a case of threatened abortion, as mentioned, the patient should be put to bed and kept there until the bleeding has ceased for at least four or five days. If there is any constipation, give a very mild cathartic—one dram of Kasagra—at bedtime, and an enema each morning. When all symptoms have ceased, the patient may be allowed to get up, but should be kept very quiet. She must avoid any excessive exercise, and if after being up, the hemorrhage returns, she should call her physician immediately.

In treating and caring for all cases of threatened abortion, we should act on the theory that the ovum is still living, and our aim should be to bring it to full term. If an incomplete abortion does occur, and it is necessary for the physician to empty the uterus, he will do a currettement under the most antiseptic precautions. After the currettement, it is necessary for the patient to remain in bed after the lochia has ceased for a few days, and follow out the same treatment as given after the birth of a full term child.

Miscarriage is a term applied to the expulsion of the foetus from the uterus, between the beginning of the fourth month and the sixth month. A miscarriage is not as common as an abortion, and it is not so difficult in these cases to tell whether abortion is complete or not. If the ovum is expelled, the patient or nurse usually keeps both the foetus and placenta for the doctor to examine.

The nursing care of the patient for abortion, miscarriage or premature birth is practically the same as if labor took place at full term. A great many women do not realize the necessity of the proper care and attention which they should receive during such a critical time. Many women ruin their lives, or ruin their health, by treating such cases indifferently, and we often see as much indifference displayed by the husband as we do by the wife.

A case of abortion, miscarriage, or premature birth, improperly nursed or managed, only means suffering, poor health and added expense in the future. Every case of abortion should be considered a serious matter. An experienced physician should be consulted in such cases, as the future health of the patient depends upon how and when the currettement is performed. As we have mentioned, the trained physician and the trained nurse can manage and care for an obstetrical case better than one untrained, and the same is true in a case of abortion.

# Paragraph 977 PUBERTY.

Puberty is that period in life in which the young girl develops into womanhood. It generally occurs between the thirteenth and fifteenth year. It occurs earlier in warmer countries than it does in cold climates. Heredity is also a factor in determining the time of puberty. Environment and hygienic surroundings play an important part in determining the age of puberty.

The physical changes that lead up to puberty are general in their development and not fully complete, as a rule, until the age of twenty, and it is at this time in a woman's development that she becomes sufficiently matured to become pregnant; therefore, girls should not marry until the full physical development of womanhood has been reached and the pelvis and its organs are matured. It is a mistake for girls to marry in their teens and give birth to children during these years. Mothers should

therefore be taught that puberty does not mean fitness for marriage. They should realize this fact and instruct their daughters not to marry until the proper time.

Plato says. 'A woman may bear children to the State at twenty years of age.' This change that a girl undergoes during puberty makes her more graceful, changes her voice, enlarges her hips and breasts and both the external and internal generative organs are developed when menstruation appears, and the child changes into womanhood.

Parvin says, 'The girl passes into womanhood, puts away childish things, turns from frivolous amusements, from the toys and playthings, from rude sports in which she has found pleasure. She enters a new life, has new thoughts, desires and emotions. Heretofore she had lived solely in and for the present, but the future with its lights and shadows, its hopes and fears, marks a large part of her life. She is more sensitive, more reserved and manifests a modest dignity, giving an exceptional respect. Her individuality becomes more manifest, her sense of duty stronger and her ambitions become greater.'

Every mother should realize that this is a critical time in the life of her daughter, whose future health and usefulness depends largely upon her mode of living during this period. The future burdens of the home maker require a sound and vigorous constitution; in other words, perfect health, which cannot be obtained without strict attention to the care of the body.

Her diet should be simple and wholesome. The character and the amount of exercise carefully regulated. Over-study should be strictly forbidden, especially during the menstrual period. We find more physical wrecks that are due to over-study and mental over-strain, during puberty, as the result of our present systems of education, as conducted in our schools and colleges, than from any other one cause.

# Paragraph 978 MENSTRUATION.

Menstruation, or the monthly sickness as it is generally called, is characterized by a bloody discharge from the uterus. It begins at puberty and ceases with the menopause. It is generally absent during pregnancy and while the child nurses. The local symptoms, in normal cases, are backache and feeling of weight or fullness in the pelvis. The general symptoms manifest themselves in the way of flashes of heat, chilliness, loss of ambition, and often lack of appetite. Digestion is interfered with more or less, and diarrhea, accompanied with irritation of the bladder, is noticed in some cases. The breasts are often swollen and painful. Sometimes dark circles appear under the eyes. Some women suffer more or less with headache during menstruation; in others, acne will appear on the face.

There is a congested condition that takes place in the pelvic organs. They become enlarged and gorged with blood, and the vagina is intensely congested and assumes a violet color. When the menstrual flow appears, this congested condition is relieved and lessened in severity, or it may disappear altogether. The beginning of the flow, in normal cases, is composed of mucous streaked with blood, and when it becomes well established it consists of pure blood mixed with mucous. As the flow begins to subside, the blood lessons, and it again becomes more mucous in character. It is dark in color, and does not form clots. Various diseased conditions may alter the character of the flow to most any degree.

Menstruation occurs, on an average, about every twenty-eight days, or thirteen times each year; yet every woman is a law unto herself, and there is no fixed time for menstruation to occur in every case. Some women menstruate every two weeks, others only two or three times a year, yet they are perfectly well. In normal cases, during the first year of menstrual life, the flow is often very irregular; may be absent one or two months at a time after it first appears, or it may occur once or twice

at varying intervals before it becomes thoroughly established. The flow generally lasts from three to six days—no fixed time, because in some individuals it lasts longer than it does in others. The average amount of blood lost at each menstrual period is from six to eight ounces, yet it may be more or less, and the woman may be perfectly well. The average length of menstrual life is from thirty to thirty-five years.

### Paragraph 979

NURSING CARE. The general care that a woman should take during menstrual period are common sense principles and the general laws of hygiene. During the first twenty-four hours of flow, the pelvic organs are intensely congested, and during this time a woman should remain in her room in bed, or lie on a sofa, and her duties should be as light as possible. At no time during the flow should she take active exercise. Cold baths in any form should be avoided. She should not sit in draughts or be exposed to the weather in any way.

The laws of cleanliness should be strictly enforced. A woman menstruating should take a general sponge bath of tepid water and soap daily, and the external organs should be cleansed two or three times a day with warm water and soap. Napkins should be changed frequently and not allowed to become saturated. In normal cases, vaginal injections should not be employed while a woman is flowing unless ordered by a physician for medical reasons.

#### Paragraph 980

PAINFUL MENSTRUATION. Painful menstruation is a condition whereby women suffer more or less general and local discomfort during the menstrual period. The majority of women are afflicted in this way, and it is caused by a neuralgia or pelvic congestion, undeveloped genital organs, or an obstruction. The neuralgia, inflammation of the pelvic organs, and obstruction, are probably the three most common causes. Anything that undermines the nervous system has a tendency to cause painful menstruation.

We find that constitutional diseases, habits, and environments are important factors. These conditions cause an exhausted state of the nervous system. Mental over-work, like our modern methods of education, which require such a mental strain, has a great deal to do with placing the nervous system in such a condition that the result is painful menstruation.

Any inflammatory condition, or inflammation of the uterus, tubes, or ovaries, or a displaced uterus, will cause painful menstruation. One of the common causes is obstruction of the opening into the uterus, and in these cases the pains are very severe until the flow starts. The cause of the obstruction may be a bend in the canal, or it may be contraction of the muscles.

A patient suffering with painful menstruation will have symptoms according to the cause. It differs a great deal, and some patients have pain before the flow starts, others during the menstruation, and others after it stops. The pain is generally located in the abdomen, in the pelvic cavity, and low down in the back, or it may even extend down the thighs. The character of the pain also varies. It may be constant, intermittent, remittent, fixed, shooting, expulsive, labor-like, sharp, dull, bearing-down, heavy and dragging.

## Paragraph 981

NURSING TREATMENT. The successful treatment of painful menstruation depends upon the recognition and removal of the cause. Administration of stimulants and morphine as a routine treatment should be condemned, because they are not curative, and there is danger of the patient becoming addicted to their use. There are a great many things that a patient can do to relieve such conditions; such as rest, diet, care of the bowels, clothing, vaginal douches, change of residence, and the rest cure. Physical rest is important and the patient should remain quiet during the flow, preferably in bed.

Between the periods a woman should take plenty of exercise in the open air and sunshine. The nature

of the cause of the painful menstruation must, however, be considered, and patients that have any heart trouble, serious pelvic inflammation, or diseased condition of any important organs, should not be allowed to take violent forms of exercise. The diet should be carefully regulated and easily digested foods should be given. Keep the kidneys active by having the patient drink plenty of pure water. Constipation must be given proper attention and laxatives like Kasagra, alternating with saline laxatives, are especially beneficial.

Bathing: The skin must be kept active by daily bathing of the entire body. Hot sitz baths often give great comfort and relief to the patient, and are especially recommended in acute neuralgic conditions. Oftentimes a full hot bath from fifteen to twenty minutes will be followed by great relief, and if given at the beginning of menstruation, before the attack, it may even avoid it or at least lessen its severity.

Clothing should be worn in such a manner, and of sufficient weight, to protect the body from sudden changes of temperature. The clothing should not constrict the waist, and it is a good idea to wear a flannel bandage over the adbomen.

DOUCHES. Hot vaginal douches of plain sterile water are of the utmost importance in the treatment of painful menstruation. Especially is this true when the cause is due to neuralgic and pelvic congestion or inflammation. They should be given between the periods, as well as at the time of the attack. Persons suffering from nervous exhaustion should take the rest cure.

DRUG TREATMENT. There are a great many remedies recommended which relieve the pain during menstruation. Different drug houses manufacture various combinations of drugs, and some of the good ones are: Lupulin Compound (Upjohn), Buckley's Uterine Tonic, Hayden's Viburnum Compound. These preparations can be taken between the menstrual periods three or four times a day, and oftener in severe cases. During the flow, when the pain is so severe, they can be taken every hour until relieved.

Hayden's Viburnum Compound is a liquid, and gives best results when taken in a little hot water; a teaspoonful every half hour to two hours as required.

Cases of painful menstruation should be correctly diagnosed and the appropriate treatment given. Any of the above remedies can be taken in connection with the hygienic treatment and fairly good results obtained. If a case of painful menstruation is not relieved by the above treatment, a physician should be consulted to ascertain the exact cause and give the case the proper medical attention.

# Paragraph 982 MENOPAUSE.

The change of life is that period in which a woman ceases to menstruate and bear children. It generally occurs between forty-five and fifty years of age. Cases are on record where menstruation stopped at the age of twenty-two years and continued over the eightieth year. The change generally comes on gradually and continues from two and one-half to three years, or even longer. Sometimes it is very brief and sudden; that is, it is regular up to a certain time, then stops and never returns. Certain conditions, like typhoid fever, cholera or malaria, sudden grief, sudden fear, may cause the sudden cessation of menstruation.

The entire system undergoes more or less of a physical change during this period in a woman's life. The nervous and digestive systems are affected more or less. Probably the first symptom that a woman has of the change of life is the stopping of the menstrual flow. In most cases it is gradual, and instead of the menstruation occurring at the regular time, it will be delayed.

The most marked symptom is the disturbance in the circulation, giving the sudden sensation of heat over the face and neck, or over the entire body, followed by profuse sweating and feeling of chilliness. Patients going through the change will also often have the sensation of fullness in the head,

indistinct vision, headaches, sleeplessness, vertigo, fainting spells, cold hands and feet, buzzing noises in the ears, nose-bleed, hemorrhages from the gums or palpitation of the heart.

### Paragraph 983

NURSING TREATMENT: The nursing treatment consists in keeping the patient's health in the best possible condition by careful attention to the laws of hygiene. Special attention should be directed to the condition of the bowels. See that they are regular in order to prevent a congested condition, which would occur if bowels become sluggish. The action of the kidneys should be carefully watched, as well as the bowels. The patient should drink plenty of water in order to keep the kidneys well flushed. The patient's diet should be simple and nutritious. All highly seasoned or highly spiced foods should be forbidden; exercise in the open air; a cool sponge bath, spray or plunge should be taken every morning before breakfast; and once or twice a week the patient should be given a full hot bath just before retiring at night.

#### Paragraph 984

PROLAPSE OF THE BOWELS OR RECTUM.

In young infants, there is more or less protrusion of the bowel, but as a rule, it need not cause the mother any anxiety. It will generally be retained as the child grows older. There is a prolapsed condition of the bowels sometimes which is very marked, and occurs in cases of severe diarrhea; or straining during a bowel movement, caused by constipation, or in weak and delicate children.

When it is only slight, the lining membrane of the bowel is pushed out every time the bowels are opened with the slightest straining effort. It forms a purplish-red ring just outside of the opening, but it can be easily pushed back, or it goes back by itself after a little time.

In other cases, where the prolapse is more marked, not only the lining membrane of the bowel, but the bowel itself may become prolapsed several

inches with every movement of the bowels. If a prolapsed condition continues, it causes more or less pain and discomfort. After such an extensive prolapse has occurred, it is generally repeated with more or less frequency.

#### Paragraph 985

NURSING TREATMENT. The first thing to do is to replace the prolapse. Lay the child on its stomach or back, and the protruding bowel should be gently pushed back with the finger, using a rubber surgical glove if you have one. The bowel should first be well lubricated with vaseline, as well as the glove or finger.

In some cases, it will assist greatly by having an assistant elevate the buttocks to a marked degree. To prevent the prolapse from recurring, great care should be taken not to allow the child to become constipated, and avoid all straining.

When the bowels move, the buttocks should be pressed together, in order to support the rectum, and if the child can be taught to have the bowel movements lying on its back, using a bed-pan or diaper, it will be of great advantage. When the toilet is used, the seat should have a very small opening, so as to give support to the parts. This will have a tendency to prevent prolapse of the bowel. Cold bathing of the parts is very useful.

If the mother or nurse will give the case proper treatment and care, as outlined, they can, in most cases, prevent or cure the prolapsed condition. Some very bad cases need an operation, and in such cases a surgeon should be consulted.

# Paragraph 986 SOLUTIONS

## No. of Grains per Ounce

- 4.6 grains to the ounce equals 1% solution
- 9.2 grains to the ounce equals 2% solution
- 23.4 grains to the ounce equals 5% solution
- 42.9 grains to the ounce equals 10% solution
- 100.3 grains to the ounce equals 20% solution
- 253.5 grains to the ounce equals 40% solution
- 302.5 grains to the ounce equals 50% solution

#### SOLUTIONS—Continued

# No. of Grains per Pint (16 oz.)

- 1-500 requires 14:56 grains per pint (16 fluid oz.)
- 1-1000 requires 7.30 grains per pint (16 fluid oz.)
- 1-2000 requires 3.65 grains per pint (16 fluid oz.)
- 1-3000 requires 2.43 grains per pint (16 fluid oz.)
- 1-4000 requires 1.82 grains per pint (16 fluid oz.)

#### Paragraph 987

HEAT UNITS OR CALORIES. A calorie is the amount of heat necessary to raise the temperature of 1 Kilo 1°C. The determination of the heat energy expressed by a given number of calories can be applied in estimating the food requirement for infants. The caloric value of 1 ounce of 4 per cent milk is 20; 16 times 20 calories equal 320 calories to a pint, or 32 times 20 calories equal 640 calories to 1 quart.

#### Paragraph 988

The caloric values of different foods are given in the following table:

Food 1 ounce—		Approximate	Caloric	Value.
Cream (16 p	er cent)			54
Milk (4 per	cent creat	m )		20
Milk (2 per	cent crea	.m )		15
Milk (1 per	cent creat	m )		12
Milk, fat f	ree			10
Whey				6
Condensed M:	ilk		]	132
Buttermilk				10
Albumin Mil	k			13
Malt-soup Ex	tract		•••••	80
Malt-soup (f	Cormula as	given)		22
Milk-sugar	(by weight	· )	]	17
Cane-sugar	(by weight	)	]	17
Malt-sugar	(by weight	t)		10
Barley flour	r (by weig	ght)	]	.02
Rice flour	(by weight	)		_02
Wheat flour	(by weigh	t)		_02

FOODS	AM	OUNT CA	LORIES	
Applesauce	1	ounce	30	
Bacon	1,	/6 ounce	30	
Bread	A.	verage slice	80	
Butter	1	pat (1/3 ounce)	80	
Buttermilk	1	ounce	11	
Cane-sugar	1	ounce	120	
Carrot	1	ounce	13	
Cereal (cooked)	1	heaping teaspoonful	50	
Cereal water (oatmeal).	].	ounce	3	
Chymogen milk	1	ounce	21	
Cow's milk	1	ounce	21	
Crackers	1	ounce	114	
Cream (16 per cent)	1	ounce	54	
Custard	1	ounce	60	
Dextrimaltose				
Egg.	1	(2 ounces)	64	
Egg (white)	1		14	
Egg (yolk)	1		50	
Flour	1	ounce	100	
Gelatin	1	ounce	50	
Human milk				
Keller's Malt Soup	1	ounce	25	
Malt (extract)				
Meat				
Milk-sugar	1	ounce	130	
Potato	1	medium size	90	
Rice (boiled)	1	tablespoonful	90	)
Skimmed Milk				
Soup (chicken)				
Spinach	:.1	ounce	8	,
Toast	A	verage slice	80	)

### Paragraph 989

One heaping tablespoonful of cane-sugar equals 1 ounce; 3 level tablespoonfuls of milk-sugar equal 1 ounce. All ingredients measured by table-spoons or teaspoons are measured level. To measure a spoonful, fill the spoon and level it off with the back of a case-knife.

#### TABLE OF MEASURES.

4 saltspoonsequal	1	teaspoon
2 teaspoons, ',	1	dessertspoon
3 teaspoons, ,,	1	tablespoon
1½ dessertspoons	1	tablespoon
2 tablespoons ,,	1	ounce
3 dessertspoons ,,	1	ounce
6 teaspoons, ',	1	ounce
8 drachms, ',	1	ounce
2 ounces, ',	1	wineglass
8 ounces,,	1	cup or tumbler
16 tablespoons, ',	1	cup
2 ordinary teacups, ',	1	pint
2 pints, ','	1	quart

#### Paragraph 990

### QUANTITY OF FOOD FOR FIRST YEAR.

AGE.		AMO	TUUC	•
1 to 7 days	1	to	2 0	unces
2 weeks	2	to	$2\frac{1}{2}$	, ,
3 weeks	2	to	3	, ,
4 to 8 weeks	21	2 to	4	, ,
2 months	3	to	4	, ,
3 to 4 months	3	to	5	, ,
5 months	4	to	6	, ,
6 months	5	to	8	, ,
7 to 10 months	6	to	8	, ,
ll months	6	to	9	, ,
12 months	7	to	9	, ,

#### Paragraph 991

# TABLE OF APPROXIMATE EQUIVALENT MEASURES:

To know the equivalent measures is very important, especially from a nurse's standpoint. If you know that 1 minim equals 1 drop of water, and 1 minim equals 2 drops of tinctures, spirits, or wines, it is of great value. The following is a table for comparison:

l minim equals 1 drop of water, or two drops of tinctures, spirits, or wines.

- 30 minims equals ½ fluidrachm, or 1 coffespoonful.
- 60 minims equals 1 fluidrachm, or 1 teaspoonful.
  - 2 fluidrachms equals 2 teaspoonfuls, or 1 dessertspoonful.
  - 4 fluidrachms equals ½ fluidounce, or 4 teaspoonfuls, or 1 tablespoonful.
  - 8 fluidrachms equals 1 fluidounce, or 2 tablespoonfuls.
  - 2 fluidounces equals 4 tablespoonfuls, or 1 wineglassful.
  - 8 fluidounces equals ½ pint, or 1 tumblerful.
- 16 fluidounces equals 1 pint.
- 32 fluidounces equals 2 pints or 1 quart.
  - 8 pints equals 4 quarts, or 1 gallon.

In measuring minims, it is best that you obtain a small minim graduate glass from your druggist, as very often your physician will prescribe medicines to be given in minims or drops.

Now remember, and do not forget this, that a drop is a very variable quantity. It depends altogether upon the liquid used, or the medicine given, and the article from which the drop falls. If you are going to give drops, have your druggist secure and test for you an accurate medicine dropper. This will give 60 drops of water to the fluidrachm, or 1 teaspoonful; that is 1 drop will equal 1 minim. Most all medicines that are prescribed, which contain alcohol, also whiskey and other stimulants, will give about 120 drops to the fluidrachm, or 1 teaspoonful-that is 2 drops equal 1 minim, so if your physician orders a drop of laudanum, and you are using a minim graduate glass, you would measure only half a minim. You see the difference which exists between the drop and the minim is a matter of the very greatest importance.

If the accurate dropper cannot be secured, medicine should be dropped from the bottle, with the cork partially covering the opening. The ordinary medicine dropper sold on the market does

not drop medicine properly, as the drop is too small, and same can be said in measuring larger doses, using teaspoonfuls and tablespoonfuls, because they vary so much in size, and the accurate dose cannot be obtained.

Every medicine chest should be supplied with a perfect medicine dropper, and a 2 ounce glass graduate—then there can be no mistakes made.

#### Paragraph 992

DROPS. If a physician orders half a drop to be given at a time, you would put 1 drop in 2 teaspoonfuls of water, and then you give 1 teaspoonful of this at a dose. In like manner, if the physician orders half a teaspoonful to be given, you measure out 1 fluidrachm, or 1 teaspoonful, add to this 1 teaspoonful of water, and then give 1 teaspoonful of the mixture, which would equal a half a teaspoonful of the medicine. Do not try to measure a half teaspoonful with a spoon alone, as it will be very inaccurate. Always remember that the medicine dropper and glass graduate are two essential articles for the administration of medicine to children.

#### Paragraph 993

#### TABLE OF DIGESTION.

Article of Diet-	How Prepared	Time, H.M.
Apples, sour hard	Raw	2:50
Apples, sour mellow	Raw	2:00
Apples, sweet mellow	Raw	1:30
Barley	Boiled	2:00
Brains	Boiled	1:45
Beef		3 to 4 hours
Butter	Melted	3:30
Beans, pod	Boiled	2:30
Bread, fresh white	Baked	3:30
Bread, corn	Baked	3:15
Beets	Boiled	3:45
Chicken, full-grown	Fricasseed	2:45
Custard	Baked	2:45

# TABLE OF DIGESTION—Continued

Article of Diet—	How Prepared Time,	H.M.
Codfish, cured dried	Boiled	2:00
Cheese, old strong	Raw	3:30
Chicken soup	Boiled	3:00
Carrots	Boiled	3:15
Cabbage	Raw	2:30
Cabbage	Boiled	4:30
Dumpling, apple	Boiled	3:00
Eggs, fresh	Soft boiled	3:00
Fish, fresh	Fried or boiled	3:00
Gelatin	Boiled	2:30
Green Corn and Beans	Boiled	2:30
Hash, meat and vegetables	Warmed	2:30
Milk	Boiled	2:00
Milk	Raw	2:15
Mutton		3:00
Oysters, fresh	Raw	2:55
Oysters, fresh	Stewed	3:30
Oyster soup	Boiled	3:30
Pork steak		3:15
Pork, fat and lean	Roasted	5:15
Parsnips		2:30
Potatoes, Irish	Boiled	3:30
Potatoes, Irish	Baked	2:30
Rice		1:00
Sago	Boiled	1:45
Soup, beef, vegetables, bu	read Boiled	4:00
Soup, marrow bones		4:15
Soup, bean		3:00
Soup, barley		1:30
Soup, mutton		3:30
Sausage, fresh		3:20
Tapioca		2:00
Turkey		2:30
Turnips		3:30
Veal, fresh		4:00
Veal, fresh	Fried	4:30

## Paragraph 994

# TIME REQUIRED TO COOK VEGETABLES.

Asparagus	20	to	30	minutes
Beets, young			45	minutes
Beets, old	2	to	3	hours
Cabbage	45	to	60	minutes
Cauliflower	20	to	30	minutes
Celery	20	to	30	minutes
Carrots	35	to	45	minutes
Green Peas	30	to	45	minutes
Green Corn	12	to	20	minutes
T ' D	7 7		2 0 7	w
Lima Beans	L	10 U1	. 01	г. шот.е
Macaroni				
	45	to	60	minutes
Macaroni	45	to to	60 60	minutes minutes
Macaroni Onions	45 45	to to to	60 60 30	minutes minutes minutes
Macaroni Onions Potatoes	45 45 25	to to to	60 60 30 45	minutes minutes minutes
Macaroni Onions Potatoes Parsnips	45 45 25 30	to to to	60 60 30 45 45	minutes minutes minutes minutes
Macaroni Onions Potatoes Parsnips Rice	45 25 30	to to to	60 60 30 45 45 45	minutes minutes minutes minutes minutes minutes minutes
Macaroni Onions Potatoes Parsnips Rice String Beans	452530	to to to	60 60 30 45 45 45	minutes minutes minutes minutes minutes minutes minutes
Macaroni Onions Potatoes Parsnips Rice String Beans Spinach	452530	to to to	60 60 30 45 45 45 45 20	minutes minutes minutes minutes minutes minutes minutes minutes

## Paragraph 995

# FOOD REQUIRED PER POUND WEIGHT.

Weight	of Chil	Ld.	Quantity	for	Eac	ch Fee	ding.
11	pounds				.4	ounce	s
12	pounds	***************************************			$-4\frac{1}{2}$	ounce	S
13	pounds				5	ounce	S
14	pounds				.5½	ounce	S
15	pounds				.6	ounce	S
16	pounds				$.6\frac{1}{2}$	ounce	S
17	pounds		•••••		.7	ounce	S
18	pounds				$-7\frac{1}{2}$	ounce	S
19	pounds				8	ounce	S
20	pounds				.8½	ounce	S
21	pounds				.9.	ounce	S

#### Paragraph 996

DRUGS USED TO MODIFY COW'S MILK.

LIME WATER. Bicarbonate of Soda, Bicarbonate of Potassium, and Citrate of Soda are the four drugs used to modify cow's milk. These are used to neutralize the acidity in cow's milk and make the curds more flocculent. Instead of plain lime water, some physicians recommend a saccharated solution of lime water—5 to 15 drops to each feeding.

#### Paragraph 997

SACCHARATED SOLUTION OF LIME WATER is made by taking slaked lime I ounce, refined sugar (in powder) two ounces, distilled water one pint. To make the solution, mix the lime water and sugar by trituration in a mortar, place it in a bottle containing the water and shake it occasionally for a few hours, having the bottle well corked. Then after it settles, separate the clear solution with a siphon and keep it in a stoppered bottle.

#### Paragraph 998

BICARBONATE OF SODA SOLUTION is made by taking one grain of soda bicarbonate (chemically pure) to one-half ounce of water. This is the proper strength used for diluting cow's milk. One table-spoonful of bicarbonate solution is equal to about one tablespoonful of ordinary lime water. Both these solutions should be kept in a cool place with the bottle tightly corked. Always use lime water unless the physician prescribes the soda solution.

#### Paragraph 999

BICARBONATE OF POTASSIUM. In addition to the use of lime water and Bicarbonate of Soda, some use Bicarbonate of Potassium, using 10 to 15 grains to each feeding. Fischer says the potassium is used when the infant is fed on cow's milk, and has colic beginning one or two hours after feeding. In these cases, Fischer claims the potassium is much better than either Bicarbonate of Soda or Lime water.

#### Paragraph 1000

CITRATE OF SODA. Then we use Citrate of Soda; about one grain to every ounce of food. The Citrate of Soda is valuable in milk mixtures, especially during the first month, and is recommended and used by Tweedy in the Rotunda Hospital of Dublin.

# Paragraph 1001

BARLEY WATER may be substituted for lime water. It is made by using Robinson's pearl barley flour, or the whole pearl barley. We generally use the barley flour, and it is made by adding two teaspoonfuls to a quart of water and boil it down to a pint; then add sufficient water to make a quart and strain it. When made out of whole pearl barley, add two teaspoonfuls of well washed pearl barley to a pint of water, boil to three-quarters of a pint and strain. Barley water should be made fresh every 24 hours. Unless it can be kept in a refrigerator, it is better to make it fresh night and morning.

#### Paragraph 1002

LIME WATER is a saturated solution of lime, and is made by shaking up unslaked lime with water in a clean bottle. Let it stand, and pour off the clear fluid. It is better to make lime water than to buy it. Lime water tablets can be purchased at the drug store.

#### Paragraph 1003

MILK SUGAR can be bought from the druggist. The solution is made by putting three tablespoonfuls of milk sugar to a pint of hot water.

#### Paragraph 1004

CREAM that has been centrifugalized at the dairy contains about 25 per cent of fat, and is generally too high a percentage of fat for infant feeding. Cream that is obtained by setting aside fresh cow's milk, letting it stand for about six hours, and then skimming off the cream, contains about 15 per cent fat. Whole milk contains about 4 per cent fat.

# Paragraph 1005 UTENSILS

Most of the utensils used in preparing baby's food should be of granite ware, as this is more thoroughly and easily cleansed. A large pan for mixing, which will hold about 2 quarts, and a spoon for stirring are absolutely necessary. A funnel which is small enough so that it can be inserted in the bottle is desirable. For the cleansing of bottles, a bottle brush must be used. A glass graduate should be used for measuring fluids.

The utensils required for home modification of cow's milk are:

- 1 glass graduate,
- l large porcelain or glass pitcher,
- l glass funnel,
- l tablespoon,
- 1 Chapin dipper for cream,
- l deep vessel,
   Hygeia bottles and nipples.

# Paragraph 1006

### GYMNASIUM EXERCISE.

The mother should appreciate and know the value of gymnastic therapeutics, and see that her children have the proper training along this line. Children as a rule, especially in cities, do not have the proper physical foundation, on account of the lack of exercise. Gymnastic exercise helps to keep the child well, and it is less susceptible to disease, on account of the physical body being in perfect condition. In the weak and delicate child, such exercise is of value in assisting nature to regain its normal health.

Parents who can afford it, should have various kinds of gymnastic appliances at home for their children, so that they can have the proper exercise under the instruction of competent teachers. The management of public schools realize the value of proper exercise and have, in connection with their schools, excellent gymnasium training. Many times the exercise is too much for some of the nervous and delicate children, and parents should realize this fact. Too much exercise is as bad as too little.

The training in institutions is universal, but special private training would have its many advantages. When the mother notices that the health of her child is not up to the average, and she sees these conditions earlier than anyone else, it is her duty to see that the child has proper gymnastic exercise, because the abnormal conditions in a child can be corrected much easier at the beginning of the trouble than later in life. Many a mother makes a sad mistake by neglecting such conditions, with the idea that the child will outgrow them.

We believe that parents are beginning to appreciate the value of giving the child a better physical foundation, and the necessity for the correction of any physical defects at the beginning. In speaking of the different diseases that are benefited by such exercise at the beginning, we refer to cases of malnutrition, constipation, children with deformed chest, beginning of curvature of the spine in its various forms, and other diseases where gymnastic therapeutics are of great value.

# Paragraph 1007 SUGGESTIVE THERAPEUTICS.

In referring to suggestive therapeutics, we will say that many progressive physicians, surgeons and dentists are taking up the practice with more or less degree of enthusiasm, making it a part of a fixed and definite therapeutic measure in the treatment of disease, and those who are thoroughly familiar with the subject cannot deny but that a great deal of good has been done for their patients along this line.

We must accept the fact that in recent years Christian Science has made great strides and secured many followers, and we know there are a great many cases cured by Christian Science. Both suggestive therapeutics and Christian Science place a patient in a suggestive condition, which aids greatly in influencing the mind over matter.

If we take a village that has six or eight doctors, and we find two or three of them doing most of the practice—what is the reason? Is it because

these certain individuals have a better medical knowledge, or is it because of their personality? A thorough investigation will invariably give the following results: that there is practically no difference in the medical or surgical ability of the physicians, but the successful men are endowed with, and practice, suggestive therapeutics. They may not do it knowingly, but in nine times out of ten this is the actual reason for their success. The person who has made a thorough study of the qualifications of a successful practitioner tells us that it is two-thirds personality, and one-third medical knowledge.

Today we find many good teachers of suggestive therapeutics, many good able men practicing the science in the profession, and such conditions were unheard of until recent years. A physician who is master of the situation, and practices it intelligently, is enabled to obtain excellent therapeutic results. It brings the physician and patient closer together, which otherwise is impossible, thus giving more efficient service. There is no question but that the principles underlying suggestive therapeutics are forcing themselves stronger and stronger each day to the attention of the medical profession, and the great importance of properly applying and directing the psychic factor in the treatment of disease.

Every mother, nurse, and physician should have a better understanding of the theory and efficacy of suggestive therapeutics, and have a knowledge of the practical methods of its administration, and if the medical profession would only master this important subject, and practice it, they would stop, to a certain degree, quackery in all its forms, which from time to time springs up as the result of the rapid evolution in psychological development.

The medical profession realizes the influence of the mind over the body, and the relation between thought and matter, in a most convincing manner, and the physician who takes advantage of this fact, and uses it in connection with his knowledge of

medicine, enjoys the confidence and appreciation of his patients. He relieves many patients who need no medicine or surgery, yet are vainly crying to the medical profession for help. We are fully aware of the fact that a physician, from the standpoint of popularity, will not speak out frankly and honestly on this subject, feeling that it might cast a reflection upon his intelligence.

We simply make these suggestions to bring the mother's and nurse's attention to this important subject, and if the mother, nurse and physician will only accept the principles underlying suggestive therapeutics, and practice it, with a thorough knowledge of the facts on which it is based, we will be well paid for giving the subject space in 'Lectures of Interest to Women.'

Every mother practices suggestive therapeutics with her children in her home every day, and she directs and influences her child by her mental attitude towards it. The training and development of the child is largely nothing more than suggestive therapeutics. The excitable, nervous, irritable mother who jumps and shouts, wrings her hands when a child accidently falls, or does anything that causes the mother to act in this manner, only imparts the same nervous and excitable condition to the child. How much better for the child if, when it gets hurt, the mother, in a calm and gentle way, will say to the child: "No that did not hurt very much," instead of making out how awful the accident was.

Then you notice callers and visitors who go into a sick room, and begin to say to the patient:
'How bad you look; my that doctor cannot be doing you any good; you just look worse all the time.'
Do you think that is encouraging and pleasing to the sick patient? The trained nurse occupies the same position with her patient as the mother does with her children. The nurse who enters the sick room with a smile and cheery word, and always makes suggestions to the patient for brighter and better things, instead of dwelling continually upon her sickness, is the successful nurse.

How much more welcome is the physician who sits down and goes over the case, explaining it in a way that is intelligent to the patient, gives the proper suggestions as to the recovery and the giving of medicine prescribed; what the medicine is given for and what it is going to do. By going into sufficient detail to give the patient full confidence that he is master of the situation, he is giving the patient a wonderful boost to overcome the diseased condition, by placing the mind of the patient in the right attitude. The relations between the mother and child, the nurse and her patient, and the physician in his practice, is nothing more than suggestive therapeutics applied in some form, together with proper medical science.

# Paragraph 1008

A WORD TO THE NEIGHBOR.

This book was purchased by its owner for her own study, to be used as a reference and guide, and to have in her home in case of emergency. She is liable to need it at any time. If you borrow it, bear this in mind, and return it as soon as possible. Many times we impose upon our neighbors through neglect, and cause them much inconvenience.

# Paragraph 1009

HOW TO DRAPE A PATIENT FOR THE SECOND AND THIRD STAGE OF LABOR.

The most unique way of doing this, is to prepare two sheets in the following manner: One should be folded once; the other should be split in the center, and fold one end of each strip back about three feet and sew it along the sides, making a sort of a stocking. After they are sterilized, they are applied in the following manner:

Take the sheet that is doubled and pin it around the patient, just under the breast, and let it fold over the abdomen as much as it will; then take the stocking slips, put the feet in the pockets, and bring the long strips up over the patient's legs, one for each leg. The strips can be pinned together over the abdomen, including the sheet

#### LECTURES OF INTEREST TO WOMEN

that is around the patient. This covers the patient completely, and gives a sterile drape that will stay in place, giving plenty of room for delivery.

After labor is complete, unpin the sheet that is around the body, and remove it from under the patient, including the stocking slips, leaving the sheet on the table or bed perfectly clean, as the Kelly pad is placed under this sterile sheet, and they are all removed together; that is, the drape sheet, Kelly pad and stocking slips.

# Paragraph 1010 SEXUAL LIFE.

Of this delicate subject, we feel that we are duty bound to make some mention, and that it is the duty of every married couple to become broader, and better educated along these lines. We do not hesitate to say that ignorance of this subject creates more family discord than any one subject we know of. Mothers should be able to advise their daughters, and fathers, their sons, on sex hygiene, when they are preparing to be married, instead of letting them start life in ignorance on such an important subject.

# Paragraph 1011 SEX CONTROL.

The pre-determination of sex has been a favorite topic for speculative theorizing, but we know of no plausible theory that has yet been advanced that is applicable to a majority of cases, and the sexes of the children that are born continue to be in about equal proportion. There are authors who claim that the sex of a child can be regulated, but so far we have failed to find any convincing evidence of their theory.

# Paragraph 1012

HOME MEDICINE CABINET SHOULD CONTAIN. SURGICAL SUPPLIES:

½ lb. Cotton (surgical).

½ doz. 2-in. gauze bandages.

% doz. l yard package plain gauze.

- 5 yds. 1-in. O. Z. Adhesive plaster.
- 2 Medicine droppers (straight).
- 1 No. 12 A. soft rubber catheter.
- 1 No. 7 A. soft rubber catheter.
- 1 Fountain Syringe.
- 1 Hot water bag.
- 1 Bed-pan.
- 1 Rectal tube.

# DRUGS FOR LOCAL USE:

- ½ pint alcohol.
- 2 oz. Lysol.
- 4 oz. Turpentine.
- 4 oz. Liquid Green Soap.
- 1 oz. Iodine.
- 2 tubes Unguentine for burns.
- 1 tube Oxide Zinc Ointment.
- 1 bottle Bichloride tablets (small blue).
- ½ lb. Boracic Acid crystals.
- 3 oz. Camphorated oil.
- 1 bottle of Infant Glycerine Suppositories.
- 2 oz. Liq. Albolene and Pinoleum compound for cold.
- 12 Menthol compound tablets for gargle.

# DRUGS FOR INTERNAL USE:

- ½ lb. Epsom Salts.
- l package Abbott's Saline laxative for bowels.
- 50 Dosimetric Trinity granules No. 1 for fever.
- l bottle Segraphin tablets for bowels.
- 50 Calomel gr  $\frac{1}{4}$  for adults.
- 50 Calomel gr 1/10 aromatic for children.
- 4 oz. Castor oil.
- 50 Peptenzyme 5 gr tablets for stomach.
- 100 Anti-constipation granules.
- 50 Intestinal 5 gr Antiseptic for stomach.
- 50 Anodyne for Infants.
- 50 Calcidin 1/3 tablets for colds for children.
- 4 oz. Abortussis Cough mixture.
- 24 cold preferred mulford for adults.
- 1 small bottle Phillips' Milk of Magnesia.
- 12 Headache tablets.

### Paragraph 1013

#### HOME MEDICAL TREATMENT.

It is not our aim to teach mothers or nurses to be physicians or druggists; that is, that they should be able to diagnose and give medical treatment to patients without first consulting their physician, but many times it is impossible for the physician to come immediately when called; or sickness may begin in the night, at a time when a physician cannot be secured, and in rural districts the distance is so far for the physician to travel, which often causes delay in his coming, that it is very necessary that the home medicine cabinet contains remedies that will give first aid to all common ailments, of which the mother should be familiar, so that she can give the necessary relief in cases of accident or sickness until the physician arrives.

The following drugs, prescriptions, and directions accompanying each, are given with this aim in view, and any mother who will become familiar with these remedies and their administration, can give them as they should be given, and she will be able to care for her children intelligently.

#### Paragraph 1014

CALCIDIN (Abbott's). Calcidin is of special value in croup, sore throat, bronchitis, pneumonia, influenza, cold in the head, and all catarrhal conditions of the respiratory tract. The tablets should be black in color; if they are gray, they have lost their strength and are of no value. Calcidin is made in 1/3 to 5 grain tablets. For children under two years old, give 1/3 to 1 grain tablet every fifteen minutes to two hours as needed; over two years, give 1 grain tablet. Mash up the tablet in powdered form, and give it in a half teaspoonful of water as directed.

#### Paragraph 1015

AGARICIN, gr 1-12 pills (Abbott's). This drug is used to arrest night sweats and excessive perspiration from any cause. In adults give four of the 1-12 gr. granules as the initial dose. It should

be given three hours before the expected sweat. The dose may be increased until the desired effect is maintained; that is, six, eight, or ten of the granules may be given if necessary, or the dose of four granules may be repeated every four to six hours as required.

# Paragraph 1016

ANODYNE FOR INFANTS, (Waugh). This formula, known as Infant's Anodyne, is indicated in pain and restlessness, due to indigestion, teething, etc., in children. Four granules dissolved in sixteen teaspoonfuls of water, I teaspoonful can be given to an infant every 15 to 30 minutes to effect; larger doses according to age.

# Paragraph 1017

TRIPLE BROMIDES that are made by Burroughs & Welcomb, are put up in large glass tubes, and the wafers are dissolved in a half a glass of water and taken three times a day for nervousness. This is the dose for adults, children in proportion. It is of value when given in treatment of nervous conditions of children, like holding the breath, etc. Dose is according to age of the child. Being given in the solution, it is very easy to give a child the correct amount, following the rule for dosage according to age.

### Paragraph 1018

KASAGRA. Kasagra is a preparation of Cascara that is used as a cathartic, and is given in 1 or 2 teaspoonful doses at bedtime. It can be given every three hours during the day if necessary, and then 2 teaspoonfuls at bedtime. It can be given with any of the digestives, where it is necessary to have a cathartic effect.

#### Paragraph 1019

COLD TABLETS. In treating a cold, it is necessary to take a brisk cathartic. Take a liquid diet and Cold Tablet No. 2 (Upjohn), l every two hours until the cold is better. If there is much running at the nose, take calcidin, l grain every hour, in addition to the Cold Tablet. At night take

a good hot lemonade and a hot mustard foot bath, or a full hot bath on going to bed.

### Paragraph 1020

RHEUMALGINE is an excellent anti-rheumatic medicine, and the adult dose is one or two teaspoonfuls every three or four hours in two or three tablespoonfuls of water. This taken in connection with salithia and an anti-rheumatic diet, will usually give good results in acute or chronic rheumatic cases. Rheumalgine is especially valuable in the treatment of chorea, as an anti-rheumatic remedy, and should be given to children according to age.

# Paragraph 1021

MENTHOL COMPOUND (Abbott's). This preparation is very effective in treating throat troubles, and makes an excellent gargle and mouth wash. The standard solution is made by dissolving one tablet in two-thirds of a glass of hot water. It is a very beneficial preparation for children, because if a little of the solution should be swallowed, no harm will result.

It is a very valuable preparation, and should be freely used in all throat troubles. Its efficiency is increased by adding one or two teaspoonfuls of glycerine to the mixture. In septic conditions like diphtheria and tonsillitis, the solution may be used double strength, and add sufficient alcohol to make the water 20 per cent strength, which would be about one and a half teaspoonfuls of alcohol to each ounce of water.

When children are too young to use the gargle or irrigate the throat, menthol compound tablets are very simple and effective. All that is necessary to irrigate the throat is a fountain syringe and a clean tube for introduction into the mouth. Place the child on its side with the head down, and mouth resting over a basin. Put two pints of normal salt solution into the fountain syringe, (have it warmed to about a temperature of 90 degrees F), and hold the syringe two feet above the child's head. The solution is allowed to flow in a brisk stream

against the swollen parts, until at least half the solution is used. This can be repeated every four to six hours.

# Paragraph 1022

POTASSIUM CHLORATE is a drug of value in tonsillitis. One grain may be given every two hours to a child one year old, and 2 grains to a child two or three years old; 16 grains in the twenty-four hours.

It is also useful in solutions for canker sores and ulcerations of the mouth, and a valuable remedy in treatment of thrush. It is an antiseptic of more value than is generally considered. It is especially valuable as a mouth wash if the gums are spongy and bleed readily.

# Paragraph 1023

TONSILLITIS TABLET (Abbott's). This tablet makes an excellent formula for the treatment of tonsillitis and all acute inflammation of the upper respiratory tract, especially when there is fever. The combination of the drugs render this tablet especially favorable for children.

It is soluble in water, and can be given in solution by using one tablet for every year of a child's age, dissolved in 24 teaspoonfuls of water, and give I teaspoonful every half hour until the temperature subsides, then every two hours until the throat trouble is relieved.

A child under four years of age, suffering with tonsillitis, spraying, swabbing, and painting the throat with various drugs is of little value, because it cannot be done thoroughly, as the child must be held by force for such treatment.

#### Paragraph 1024

PHOSPHORUS is as good a remedy for the treatment of rickets as can be given, but it should be given in combination with the proper diet. The preparation most commonly used is the Oleum Phosphoratum. This is the best form to give to children. One drop is equal to 100 grains of phosphorus. For a child one year old, give one drop, three times a day. After the first and second year, 1 to 2 drops

may be given three times a day. Phosphorus should always be given after meals.

### Paragraph 1025

MIGRAINE (Abbott's No. 301). Migraine, or headache tablets should be kept on hand, as they are a good headache remedy, and this combination will be most suitable for universal use in such cases. A child twelve years old can take one tablet every three or four hours as required; for adults, one can be taken every fifteen to thirty minutes until relieved, then one every four or five hours. For older children, it is best to crush the tablet into powdered form, and place it in 2/3 of a teaspoonful of hot water. This preparation is not intended for infants or young children.

#### Paragraph 1026

RHEUMATIC (Candler No. 1 Abbott's). This is an excellent combination of drugs for the treatment of acute rheumatism, neuralgia and sciatica. It should be taken with plenty of water, and in sufficient doses to obtain the desired results. For the first few doses, in severe cases, 2 tablets may be taken every three hours; after that, only one tablet every three hours.

### Paragraph 1027

COD LIVER OIL. Cod liver oil is valuable in all wasting diseases, and conditions where restoratives are required, and it is of special value in scurvy. In combination with cod liver oil, arsenic and strychnine are most valuable. Hemaboloids with arsenic and strychnine, is also an excellent tonic. Along with the medical treatment, there is nothing more effective in treating infants, than the giving of orange juice, one teaspoonful every two hours; giving one ounce in twenty-four hours. The lime salts are also valuable, and 3 to 5 grains of calcium lactate may be given three times a day. The above tonics are of value in scurvy to build up the system.

#### Paragraph 1028

ANTICONSTIPATION (Waugh), made by Abbott. This combination is an excellent pill for treating

constipation in chronic cases. It is a small dose and a sufficient number may be given to get the desired effect; then the dose can be reduced as curative results are secured. 3 to 6, or more, of the pills should be given three times a day, after meals, to produce one daily bowel movement. Continue taking the required dose each day until the bowels move twice, or too freely; then reduce the dose, omitting one pill at each dose. Take this amount for a day or two, or a week, as the case requires, and then omit another pill. The dose is reduced until the patient needs to take possibly only one pill every other night, and finally omit them altogether. Taking the pills as directed, with the proper diet, will generally cure chronic constipation.

### Paragraph 1029

CALOMEL WITH AROMATICS. 1-10 calomel tablets with aromatic flavor is the most pleasing way to give calomel, especially to children and women with delicate stomachs. One or two tablets are given every fifteen minutes for four to six doses. In two hours after the last dose, give some saline laxative, such as, Citrate of Magnesia or saline laxative.

#### Paragraph 1030

DOSIMETRIC TRINITY No. 1 (Abbott's). This particular formula and combination of drugs is very useful in fever cases. The adult dose is given every half to one hour until the fever is reduced. For children, dissolve one pill for each year of age in 24 teaspoonfuls of water, and give 1 teaspoonful of the mixture every thirty to sixty minutes as required. Take temperature every two hours.

#### Paragraph 1031

INCONTINENCE (Abbott's). This combination of drugs will be very acceptable to the mother who has children that wet the bed. It is very effective in treating many forms of this condition. The medicine is given as directed in 'Incontinence of Urine,' given in another part of this book. One pill is generally given every three or four hours;

the last dose being given at bedtime. Older children may be given a double dose on retiring. Special care and attention must be given this class of patients. Besides giving the incontinence tablets, see articles on 'Incontinence of Urine.''

# Paragraph 1032

STROPHANTHUS is a heart tonic, and it does not irritate the stomach; is used in fever cases when the heart is weak. When a child has scarlet fever, and the pulse is over 150 a minute during sleep, give the child (one year old) one drop of the tincture of strophanthus every two hours. It is also given in pneumonia when we have the same kind of a pulse as we have in scarlet fever. It is also used in influenza for a heart stimulant; also in typhoid fever.

### Paragraph 1033

STRYCHNINE is a heart tonic, and is given in scarlet fever when the pulse is soft and the heart action is slow and oftentimes irregular. The dose for a child one to three years is 1/200 grain, and from three to six years 1/150 grain. It is given every two to four hours. It is also given in pneumonia when a heart stimulant is needed for the same conditions as in scarlet fever. Strychnine is given in influenza for a heart stimulant, and also is given in typhoid fever.

#### Paragraph 1034

BORACIC ACID. Boracic acid, made up in a 10 per cent ointment with cold cream, may be applied locally in chicken-pox. It will relieve the itching, and is of value in preventing local skin infection. It is used as a sponge bath once a day, by adding 2 heaping tablespoonfuls to a half a gallon of boiling water. Chicken-pox patients should not be given a full bath during the active stage of eruption.

#### Paragraph 1035

LIQUID ALBOLENE AND PINOLEUM COMPOUND. This is made by adding one teaspoonful of Pinoleum to two ounces of Liquid Albolene, and it is used for colds in the head and coryza. A few drops is put in

each nostril two or three times a day with a medicine dropper.

# Paragraph 1036

SOMNOS. Somnos is given when there is loss of sleep, and when a patient has insomnia, as we often find after any serious sickness or worry. It may be used for older children as a sedative and anti-spasmodic. It is given 15 minims to one teaspoonful for a child, repeated every two or three hours in water or milk. Adults take from one teaspoonful to a tablespoonful every one or two hours. The best way to quiet a nervous patient, and produce sleep, and get the best results, is to give the first dose one hour before bedtime, and repeat on retiring, or within an hour.

#### Paragraph 1037

ABORTUSSIS. This preparation gives to the mother, who must rely upon her own judgment, more or less, in the care of children, an excellent cough syrup. It is a preparation that is indicated where there is any spasmodic coughing, like in whooping cough, bronchitis, or the effects of pneumonia, la grippe, or capillary bronchitis. A dose for children is 20 to 30 drops every hour or two as required; adult dose from 1 to 3 teaspoonfuls. In many cases, a full dose is required in order to get the effect.

Abortussis is also a good cough mixture for influenza, and can be given any time during the disease, while the cough is severe and persistent.

### Paragraph 1038

INTESTINAL ANTISEPTIC (W-A) No. 1 is a tablet which contains the sulphocarbolates of Calcium, Sodium, and Zinc, 5 grains each, and Bismuth Subsalicylate 1/2 grain. The adult dose is one tablet dissolved in a half a glass of water every two to four hours as required; children according to age. For a child under six years of age, dissolve three tablets in 8 ounces of sweetened water, and give a tablespoonful every three hours until the desired results are obtained; follow each dose with a drink of water. Between six and twelve years old, dis-

solve six tablets in 8 ounces of water, and give a tablespoonful every three hours as directed.

Sometimes Intestinal Antiseptic tablets will disturb the digestion, and cause a burning sensation in the stomach. When it does this, give, in combination with the Intestinal Antiseptic, Peptenzyme in the same amount as the Intestinal Antiseptic.

This preparation will always be found useful when there is any intestinal trouble in children, such as diarrhea, or fermentation caused by the decomposition of foodstuffs in the intestines. When there is fermentation present, the medicine will cause stools to become black, and as long as this condition is present, continue giving Intestinal Antiseptic tablets until the stools are free from any offensive odor.

Intestinal antiseptic, in combination with peptenzyme, is given in influenza. Begin giving this as soon as the tongue becomes coated, and continue until it is fairly clean. Give a half grain of intestinal antiseptic to 1 1/2 grains of peptenzyme every two hours to a child three to four years old.

#### Paragraph 1039

MILK OF MAGNESIA. Phillips' Milk of Magnesia is used almost daily in any household in the care of children, and is an excellent preparation for general use in keeping the bowels regular. In influenza, or any of the acute infectious diseases, a dose may be given at bedtime. For a child three years old, give two teaspoonfuls or more, as needed. Milk of magnesia is also added to the milk in artificial feeding, in any amount required. A small amount may be given with each feeding, or the required amount may be given at the last feeding at night.

# Paragraph 1040

CAMPHORATED OIL. Camphorated oil is one of the valuable remedies in pneumonia, and is given hypodermically. It is especially prepared for such use. The camphor is suspended in oil and put up in ampules 1/2 to 2 C. C. It is given in pneumonia, bronchitis, and in colds for children, also influenza, and any condition where there is inflammation of the lungs. Hot camphorated oil is also applied as dressing for mumps.

When a secondary infection of the lungs begins to develop in influenza, give one ampule of 3 grains of camphorated oil every half to two hours as required. Children are given smaller doses according to age.

### Paragraph 1041

DOVER'S POWDER. This is a preparation of opium, and is made in proportion of 1 grain of powdered opium, 1 grain of powdered ipecac, and 8 grains of sugar of milk. In pneumonia, when the cough is severe and continuous, for a child one to two years old, 1/4 of a grain of Dover's powder may be given. It should be dissolved in at least 2 teaspoonfuls of water. Give after feeding, and not oftener than once in two or three hours. The ordinary cough syrups disturb the stomach, and are not good in pneumonia. In giving Dover's powders see that the bowels keep regular, as it often causes constipation.

#### Paragraph 1042

ANTIPYRIN is a white powder with a somewhat bitter taste, and is very soluble in water. It is one of the coal-tar preparations, and should be given with care on account of its depressing effects. It is used in whooping cough in combination with sodium bromide, which probably gives the best combination of drugs for the control of the cough and severity of paroxysms. For a child two years old, I grain of antipyrin and 2 grains of bromide of sodium, every two hours, for four to six doses during the twenty-four hours, will often give great relief.

When antipyrin and sodium bromide is given in whooping cough, the best results are obtained when this combination is given for four to six days, and then give quinine four to six days; that is, alternate, first giving the antipyrin and

# LECTURES OF INTEREST TO WOMEN

bromide compound for a few days and then the quinin for the same length of time.

Sedatives like antipyrin and sodium bromide should not be given in whooping cough at the beginning of the disease; wait until the paroxysms have become quite severe and then it will have more effect. Little or no medicine should be given during the earliest stages of whooping cough.

#### Paragraph 1043

TPECAC. Ipecac is given in several different forms, but the one most common, and the one for special home use, will be the syrup of ipecac. In bronchitis, where there is a dry hoarse cough without secretions, 10 drops of the syrup of ipecac every half hour to two hours, until the child vomits, will sometimes abort the condition in a very short time. During the beginning of bronchitis ipecac is often given with castor oil. A child from one to three years old will be given 3 drops of castor oil and 2 drops of syrup of ipecac every two hours. After the third year, 3 drops of syrup of ipecac and 4 drops of castor oil every two hours. About eight doses should be given in the twenty-four hours.

The benefit of the ipecac and castor oil will be accomplished in bronchitis in two or three days, when it should be discontinued.

Later in the disease, after the acute stage is over with, powdered ipecac is often given in combination with tartar emetic and ammonium chlorid. For a child under six months old, a powder containing 1/80 grain of powdered ipecac, 1/4 grain of ammonium chlorid, and 1/150 grain of tartar emetic should be given every two hours; from six months to a year, powdered ipecac 1/6 grain, ammonium chlorid 1/4 grain, tartar emetic 1/100.

If the cough is very annoying and severe, 1/8 grain of Dover's powder may be added to each dose for children under six months, and 1/4 grain for children over six months of age. After the third year, a child may take 1/20 of a grain of powdered ipecac, 1 grain of ammonium chlorid, 1/80 grain

tartar emetic. In all cases, about eight doses should be given in the twenty-four hours, and if the cough demands it, a child three years old can be given as much as 1/2 grain of Dover's powder with each powder of powdered ipecac, ammonium chlorid, and tartar emetic. The powder should be given in two teaspoonfuls of thin gruel or plain water. If a tablet can be secured with the proper dose, it may be given in place of the powder. The powders or tablets are better borne by the child in bronchitis than the heavy syrups that are generally used.

Syrup of ipecac is used to cause children to vomit in the beginning of croup.

# Paragraph 1044

QUININ is a very common and well known drug, and needs no comment. It is used for older children who have whooping cough and are able to take a capsule. It must be given in sufficient amount, 12 to 20 grains in twenty-four hours, as required, for children from three to six years of age. Some parents may think it is too much to give a child, but a smaller amount would have little or no effect. The serious drawback in giving it to very young children is the bitter taste. The bitter taste of quinine is concealed best by the use of chocolate. A good preparation is the one made by Mulford. It is especially suitable for the administration of quinine to children.

The muriate of quinine is given in influenza, and to get the effect, it must be given in large doses, the same as for whooping cough. Quinine is combined with calcidin in influenza, and is given throughout the fever stage. A grain and a half of quinine and one grain of calcidin is given every two hours for a child three to six years old. We believe that quinine has the same influence over the infection of influenza as it has in malaria.

# Paragraph 1045

PHENACETIN is one of the coal-tar products, and is used to control fever and relieve pain. It is used in typhoid when the fever is high, and the child very restless. A child five to eight years

old may be given 1 to 2 grains of phenacetin every three to six hours. It is generally combined with a half a grain of citrate of caffein. It must be remembered that all coal tar products are more or less depressing, and this should be realized when giving phenacetin.

The conditions that would be most unfavorable for the administration of the drug would be any inflammation of the heart, or cases of pneumonia with heart complications. We believe it is the safest and most reliable of its class. When given for fever, it generally reduces the temperature within an hour; phenacetin is given every six to eight hours.

Phenacetin gives relief for the pain and increases perspiration. It does not relieve severe pain, but it does relieve distress and nervousness. It unlocks all secretions, produces a moist tongue, and skin. Phenacetin causes the pulse to become soft and full. It is claimed that it checks the course of fever, and preserves the vital tone of the patient. That is one of the reasons why it is used in typhoid fever.

#### Paragraph 1046

SWEET SPIRITS OF NITRE is a sedative to the circulation and nervous system. It causes sweating and increases the action of the kidneys. Hare says: 'There is probably no drug so widely employed by the laity as a household remedy which is so potent for good, and yet so harmless if wrongly used, as is this one.''

In scarlet fever, where there is kidney trouble, for a child two years old give 5 drops of sweet spirit of nitre. It may be given alone or in combination with 1 teaspoonful of aconitine mixture; it may be given every two hours. This is to be given when there is a lack of sufficient amount of urine passed. It is also given in measles.

#### Paragraph 1047

PAREGORIC is a preparation of opium that is used too freely among children, and should not be given in colic, or when the child is restless, when

teething, etc. We caution mothers not to give opium to children too freely because they do not bear the drug well. When a sedative is required, such as for the dry cough in measles, 5 to 8 drops of paregoric may be given, and repeated every two or three hours if necessary; just give enough to control the cough. Paregoric, 5 drops and sweet spirit of nitre, 3 drops, may be given every two or three hours in measles with good effect. For children two years old, as much as 8 or 10 drops of paregoric may be given. Usually two or three doses given during the night will be sufficient.

#### Paragraph 1048

CODINE SULPHATE. Codine is an alkaloid of opium, but it does not arrest secretions in the lungs and intestines as does morphine, and seldom produces constipation. Codine is highly recommended by the medical profession for nervous conditions; such as, whooping cough, also the dry cough of measles. It may be given in whooping cough to produce sleep regardless of any other treatment that is being used. A child five years old may take 1/6 grain at bedtime, and repeat during the night if the case requires it. For a child eight to twelve years of age 1/5 of a grain may be given at bedtime, and repeated once during the night if necessary. For a child from two to three years of age 1/10 of a grain may be given, and repeated not oftener than twice during the night. Codine should not be continued longer than a week or ten days.

#### Paragraph 1049

SODIUM BROMIDE is a sedative and is used in cases of whooping cough and also in measles to allay the cough, and is often given in place of paregoric. The dose for a child eight months old would be 2 grains every two hours, and give four to six doses during the twenty-four hours. A child fifteen months old can be given 2½ grains every two hours; from the fourth to the eighth year, 5 grains may be given every two hours. Not more than four to six doses should be given during the twenty-four hours.

It is also valuable in treating convulsions, and a child under one year of age may be given 8 grains of sodium bromide and 2 grains of chloral hydrate in solution. It should be given per rectum in 4 ounces of mucilage of acacia. After the first year, 3 or 4 grains of chloral are to be given, 10 to 15 grains of sodium bromide. If the convulsions are severe, and occur one right after another, it may be repeated every two to six hours as required, and may be given in smaller doses as long as there are any signs of nervous irritability. When a child can swallow, the required dose of sodium bromide may be given in half an ounce of water and repeated every one to four hours until the convulsions are controlled.

# Paragraph 1050 TONICS.

ELIXIR OF IRON, Quinine and Strychnine is a splendid preparation and one of the best all round tonics. The adult dose is I teaspoonful every three hours, to three times a day before meals as required.

#### Paragraph 1051

HEMABOLOIDS. Another good tonic is Hemaboloids with arsenic and strychnine. Especially is this valuable in cases where the patient is anaemic and needs the blood built up. It is an excellent blood medicine, and I desserts poonful is given four times a day.

# Paragraph 1052

TRIPLE ARSENIC WITH NUCLEIN TABLETS. (Abbott's). This is an excellent tonic, similar to the Elixir of Quinine, Iron and Strychnine. It is in tablet form, and for persons who prefer taking tablets in place of liquids, it is very good. It should be taken I every three hours or four times a day-before meals and at bedtime.

#### Paragraph 1053

INDIGESTION. The following are a few selected remedies that are of value in the treatment of indigestion and associated conditions with stomach trouble.

### Paragraph 1054

ELIXIR PEPSOLAXATONE is of special value when there is slight constipation with indigestion. Take 1 or 2 teaspoonfuls before meals and at bed time.

#### Paragraph 1055

PEPTENZYME is an excellent digestive, and is a good remedy when it is desired to give something to aid digestion. The dose is 1 or 2 teaspoonfuls after meals. Peptenzyme can be bought either in liquid or tablet form. The tablet contains 5 grains and is about equal to 1 teaspoonful of this Elixir.

# Paragraph 1056

ELIXIR LACTOPEPTONE is another very excellent preparation to aid indigestion. It is given I teaspoonful before meals and 2 one hour after meals. It is often valuable when there is pain occurring in the stomach one hour after eating. For such cases take peptenzyme at same time.

CARMENZYM is also an excellent digestive, and is of great value when the stomach is sour, and there is a sick condition, with a desire to vomit.

#### Paragraph 1057

ESSENCE OF PEPSIN (Fairchild's). This is to be recommended when a good digestive is indicated. It is given in doses of one teaspoonful after meals, and repeated if necessary. It may be given with any of the other digestives.

### Paragraph 1058

GAS ELIMINANT (Tracy). When there is indigestion, accompanied by a great deal of gas in the stomach, this tablet will often afford great relief. It should be chewed up or mashed in powdered form. In bad cases of indigestion with gas, take one tablet before meals, and two about a half hour after meals.

# Paragraph 1059

UTERINE SEDATIVE AND NERVINE, Candler, (Abbott's). During the change of life (Menopause), women suffer more or less with hot flashes and ovarian pains, with severe nervous spells. This

preparation is very effective in relieving this condition. With proper hygienic surroundings, one or two pills, with a little hot water, will give great relief. In severe cases, where prompt relief is required, two or three pills may be taken every two hours for three doses; then one or two pills three or four times a day as needed, to maintain the desired effect. Keep the bowels regular by taking salithia in sufficient amount, in order to secure free elimination from the bowels.

# Paragraph 1060

UTERINE TONIC, Buckley, (Abbott's). This combination of drugs is put up in pill form, and is used by thousands of physicians in treating congestive conditions of female organs, and it is considered as near specific as any combination on the market.

It relieves inflammation of the ovaries, painful menstruation, or where the flow is scanty or excessive, leucorrhea conditions due to weakness, or where there is lack of proper tone to the female organs in general. It will do a great deal to relieve many of the reflex disorders, such as headache, neuralgia, sharp shooting pains in the limbs and back. It is a splendid tonic in these female conditions where the system is exhausted from over-work, and where the patient is compelled to be on her feet constantly, or has passed through several pregnancies, or is generally run down.

For the treatment of such cases, which will depend largely upon the conditions, take for immediate relief, I pill every two hours for four doses, then every three hours to maintain the effect. Where it is necessary to take them for some time, take one daily three times a day. Always keep the bowels regular in any pelvic trouble by using saline laxative as directed, and enemas.

#### Paragraph 1061

VAGINAL ANTISEPTIC POWDER (Abbott's). This powder is a mixture of drugs that is very helpful in treating any of the catarrhal and congestive disorders of the female genitalia. It is put up in

tablet form, which makes it very convenient to use in the treatment of such cases.

For a cleansing douche, dissolve two tablets in a quart of hot water, and take the injection very slowly, retaining it for a few minutes. Where there is a great deal of leucorrhea, a stronger solution, twice the strength mentioned above, may be necessary. These cases may require a douche two or three times a day.

In leucorrhea, where there is very much vaginal discharge, chronic in character, and it will require prolonged treatment, it is a good plan to insert the tablet well up to, and back of, the cervix, and let it dissolve in the secretions, and take a plain cleansing douche the next morning. When women wish a cleansing douche, or where they wish to use medication for an ordinary case of leucorrhea, they will find the above very satisfactory.

The proper way to take a vaginal douche is to take it lying down, using a douche pan, one that has a rubber tube connected with it, so that the solution can run into a jar at the side of the bed. It is not necessary to use a douche point. Insert the plain rubber tube into the vagina about one and one-half inches. Have the bag containing the solution about four or five feet above the hips. Pinch the lips closely around the tube, then release. Repeat this every few seconds and each time let the solution gush out. This flushing of the water will cause the vaginal wall to become thoroughly stretched, and the solution will come in contact with every part of the vaginal wall and surrounding tissue.

# Paragraph 1062

SALINE LAXATIVE. Saline laxative is a very excellent form in which to administer Epsom Salts. It is one of the best for general use possibly known to the medical profession today, and should be in every home medicine cabinet. It is one of the best preparations to clean out the Alimentary canal. It is put up in effervescent combination, which makes it very agreeable to take. In all acute forms

# LECTURES OF INTEREST TO WOMEN

and conditions where the Alimentary canal is loaded with toxine, and a complete evacuation of the bowels is required, saline laxative gives best results.

The average dose is two heaping teaspoonfuls in a half a glass of water several times during the day, according to conditions. It gives best results when taken on an empty stomach on rising. When it is desired to get a marked cathartic effect, two teaspoonfuls may be given every half hour as required. Some patients require more than others. It should be taken in sufficient doses to obtain a free movement of the bowels.

The advantage of this preparation is that it can be taken at all ages; even nursing babies, either breast or bottle fed can take it. It is an excellent preparation to give to children when it is necessary to remove from the alimentary canal, undigested and decomposing stools. In young children, one or two teaspoonfuls can be dissolved in a half a glass of water, and then give a teaspoonful of the preparation every hour until the desired results are obtained. This is given according to the age of the child. Ordinarily a level teaspoonful given to a child once or twice a day will be sufficient.

It is a preparation that is pleasant to take, and rarely, if ever, causes any griping. Children who usually object to taking Epsom Salts will take the saline laxative without any difficulty. For older children, dissolve I heaping teaspoonful of the saline laxative in a half a glass of water, sugar and lemon juice being added; or grape juice and water affords an excellent vehicle.

#### Paragraph 1063

SALITHIA (Abbott's). Salithia is a preparation to be used in addition to the treating of rheumatism, and has many advantages in such cases, as it never nauseates the patient, and does not irritate the most sensitive stomach. A sufficient dose is given, and repeated until the bowels and kidneys act freely. In rheumatism, give a teaspoonful, dissolved in a large glass of water, an

hour before meals and at bedtime; if the bowels move too freely, then not so often.

TAENICIDE (Abbott's). This is a preparation used for the removal of tapeworms. It is a very simple and effective treatment, and can be used with safety either in adults or children who may have tapeworm. The dose for adults is half the contents of one bottle, and repeated in two hours if necessary. Children from 10 to 14 years old require half the amount given to adults, and under 10 a quarter of the amount is given.

The technic of giving the tapeworm remedy is as follows: Warm the medicine by standing the bottle in a pan of hot water until the medicine is very thin; then give the desired amount in about a half a glass of warm milk. Rinse the mouth immediately with plain hot milk. The patient should not be permitted to lie down after taking the medicine, but should be kept in an erect position, and move about the house. The diet the day previous to taking the treatment should be very light, and no supper in the evening.

For the treatment to be effective, it is very necessary that forced catharsis is obtained, and if within two hours after the first dose, there is not a marked cathartic effect, the dose should be repeated until the cathartic action seems to have started. It is of advantage to give an enema of strong salt water solution at once. The bowels should be allowed to move in a pail of warm water, so that the worm may float; it usually comes last.

Great care should be taken that the head is expelled. The pail should be large enough so that the patient can sit well immersed in the water, and remain in this position until the action is complete. This will prevent breakage of the worm, and the possibility of the head remaining. Carefully look for the head with a magnifying glass, if in doubt. When the head is retained sufficiently high up in the bowel, the worm will grow again quite rapidly, and when segments are noticed in the stools the treatment should be repeated. It is necessary to carry

#### LECTURES OF INTEREST TO WOMEN

out the treatment in detail, as mentioned, in order to be successful.

### Paragraph 1064

SANTONIN AND CALOMEL No. 1 (Abbott's). Santonin and calomel is a good combination of drugs, and is used for the removal of round worms. Generally in such cases, small doses repeated often act the best. Children over six years of age are given two tablets every half hour for three or four hours before retiring; the last dose being doubled; for younger children, one at the same intervals. The next morning after taking santonin and calomel, the patient should be given a good dose of saline laxative early in the morning.



# Paragraph 1065

# COMMON ABBREVIATIONS OF MEDICAL TERMS

aa.  aaa. Amalgam Ad.	Abbreviations	Latin Word	English Word
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Ad.	aaa.	Amalgam	
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# LECTURES OF INTEREST TO WOMEN

C .		
	BREVIATIONS OF ME	DICAL TERMS—Cont.
	s Latin Word	English Word
	Fiant chartulae	
10. 01101 0 A1	duodecim	made
Ft. pil, xij		Let 12 pills be made
10. p11, n1)	duodecim	de o 12 piris de made
Garg.	Gargarisma	A gargle
Gr.	Granum or grana	A grain or grains
Gtt.	Gutta or guttae	A drop or drops
Haust.	Haustus	A draught
Infus.	Infusum	An infusion
Inf.	Infusa	Let it infuse or steep
Lin.	Linimentum	Aliniment
Lot.	Lotio	Alotion
M .	Misce	Mix
Mass.	Massa	A mass
Mist.	Mistura	A mixture .
Mac.	Macero	To macerate
Man. prim.	Mane primo	First thing in the
		morning
M. or Min.	Minimum	A minim
Mitt.	Mitte	Send
Non-rep.	Non repetatur Octarius	Let it not be repeated
O. Om. alt. hor.	Omnibus alternis	A pint Every second hour
om. alt. nor.	horis	Every Second Hour
Om. bih.	Omni bihora	Every two hours
Om. 1-4 h	Omni quadrante	Every fifteen minutes
	horae	0
Opt.	Optimus	Best
Pil.	Pilula	A pill or pills
P. R. N.	Pro re nata	As demanded
Pulv.	Pulvis, Pulveres	A powder or powders
P. aeq.	Partes acquales	Equal parts
Per.	Per	Through or By
P. p. a.	Phiala prius	The bottle being first shaken
Post.	agitata Post.	After
Q. suff or		A sufficient quantity
q. s.	Qualitum Bullion	m barrioteno quantity
Q. lib	Quantum libet	As much as pleases
R.	Recipe	Take
Rad.	Radix	Aroot
Red. in pulv	Redactus in	Powdered
_	pulverem	
Rept.	Repetatur	To be repeated
S. or Sig.	Signa	Write
Ss.	Semis	The half
S. A.	Secundem artem	According to art
Simul.	Simul Sine	Together
Sin.	Singulorum	Without Of each
Sing.	DINGULOTUN	or each

COMMON ABBREVIATIONS OF MEDICAL TERMS-Cont.

Abbreviations Latin Word English Word

Solv. Solve Dissolve Sum. Sume Take

Tinct. Tinctura A tincture
T.i.d. Ter in die Thrice daily
Tritura. Tritura Triturate or gr

Tritura. Tritura Triturate or grind

Ut dictum. Ut dictum As directed

Vel. Vel. Or Verus Genuine

Ver. Verus Genuine Vitel. Vitellus Yolk of an egg

# Paragraph 1066 GLOSSARY.

#### Δ

ABDOMEN is that part of the body which lies between the thorax and the pelvis.

ABORTION is the interruption of pregnancy, and the expulsion of the ovum before the foetus is viable.

ACNE is a small pimple or eruption which sometimes affects the breast or any part of the body.

AFTER-BIRTH is the placenta with the membrane and umbilical cord.

AFTER-PAINS are the pains due to the contraction of the uterus after the placenta has been expelled.

AMENORRHEA is the absence of the menstrual flow.

ANAESTHETIC is a drug capable of producing sleep.

ANTISEPTIC is a drug which prevents pus formation or putrefaction. Among the best antiseptics are alcohol, carbolic acid, bichloride of mercury, lysol, chlorazine and ziratol.

APNEA means breathlessness from obstruction of respiratory functions. Interrupted or suspended respiration.

ATRESIA is the absence of a natural opening or passage, as the vagina, uterus, etc., whether congenital, or caused by disease.

AREOLA is the pigmented ring around the nipple, and Secondary Areola is a slightly pigmented ring

#### LECTURES OF INTEREST TO WOMEN

just outside the areola, sometimes observed after the fifth month of pregnancy.

ATROPHY means wasting or emaciation with loss of strength, but without fever.

ASCEPTIC means in a surgically clean manner.

ASEPSIS means free from infection; surgical cleanliness.

ASTRINGENT. Having the power to diminish excessive discharges.

#### B

BROMIDE. A salt consisting of a combination of bromine with a metallic base, as bromide of potassium. All of the bromides have the power of allaying nervous irritation and promoting tranquility in various disorders.

 $\mathbf{C}$ 

CADAVER. A corpse, or dead human body.

CASEOSA is the greasy white substance that covers the new-born baby.

CATHARTIC is a drug that increases evacuation from the bowels.

CATHETER is a slender tubular instrument for withdrawing fluids from a cavity of the body or for distending a passage.

CATHARSIS. Purgation of a passage from the bowels, medically or naturally.

CAUTERIZE. To burn living tissue.

CERVIX is the neck, or any neck-like part.

COLOSTRUM is the first fluid secreted by the mammary glands after delivery. It contains less casein and more albumin than ordinary milk, as well as numerous fatty globules.

CONCEPTION is the beginning of pregnancy.

CONGENITAL. Anything existing at birth, such as disease, malnutrition, deformities, etc.

CONVULSION is a spasm; a series of violent involuntary contractions of a muscle or set of muscles.

CORYZA. Acute nasal catarrh. "Cold in the head."

CYANOTIC means a blueness of the skin caused by deficient amount of oxygen in the blood.

### D

DEMULCENT. Soothing medicine or drinks, usually of a mucilaginous character.

DESQUAMATION means the peeling off of skin in flakes.

DYSPNEA means difficult breathing. It is caused by anything which interferes with the entrance of air into the lungs.

#### E

ECLAMPSIA is a sudden attack of convulsions occurring during pregnancy, labor, or just after labor.

ENEMA is a medicine or fluid injected into the rectum, either to procure an evacuation from the bowels or for nourishment.

EPISIOTOMY is an incision of the vulvar orifice to permit the foetus to pass.

EXCISE means to cut out or off.

EXCORIATION. Removal of a portion of the skin. A slight wound only abrading the skin.

#### $\mathbf{F}$

FEBRILE. Pertaining to or indicating fever.

FOETID. Having an offensive odor, particularly the odor of putrefaction.

FOETUS is the product of conception between the end of the third month of gestation and delivery. Previous to the end of the third month, the product is known as the embryo.

FORNIX. An arch or vault.

#### G

GAVAGE means forced feeding by placing food in the stomach through a tube.

GESTATION means pregnancy.

# H

HEMORRHAGE is the escape of blood from its natural channels.

HYMEN is the membranous fold which partly closes the entrance to the vagina.

HYPERTROPHY. An increase in the size of an organ or part due to increased nutritive activity.

HYSTERIA is a nervous disease, mainly of young women, characterized by lack of control over acts and emotions.

#### T

INFECTION is the communication of disease from one person to another.

INSOMNIA is inability to sleep, abnormal wakefulness.

INTRAVENOUS. Within the cavity of a vein. INTROITUS is the entrance to the vagina.

INTUBATION. Inserting a tube in the throat.

IODIDE. A non-acid combination of iodine with another element.

#### $\mathbf{L}$

LABOR is a function of the female organism by which the product of conception is expelled from the uterus through the vagina into the outside world.

LEUCORRHEA is a whitish discharge from the vagina and uterus, commonly called Whites.

LIGATED. Tied.

LOCHIA is the vaginal and uterine discharge occurring for several days after delivery.

#### M

MENOPAUSE is the change of life; the period when menstruation ceases.

MENSTRUATION is the monthly flow of blood from the uterus.

MISCARRIAGE is an expression used by the laity to signify the occurrence of a premature interruption of the pregnancy at any time.

MULTIPARA is a woman who has born several children.

#### N

NEURITIS is an inflammation of a nerve. A condition indicated by pain or tenderness over a nerve-trunk.

## 0

OBSTETRICS is the care of women during pregnancy, in childbirth and after delivery.

ODEMA is a dropsical condition caused by an increased amount of fluid within the tissue spaces.

ORCHITIS is inflammation of the testicle.

OVUM means egg, the germ-cell after impregnation has taken place; embryo and its membranes.

### P

PAPULE is a small pimple that is called "vesicle" when it is filled with fluid, and "pustule" when it is filled with pus.

PAROTID GLANDS are the glands situated under the ear.

PERIPHERY. Circumference; bounding line; external surface.

PERISTALTIC. Applied to all movements of the interior organs which are independent of the spinal marrow.

PLACENTA is the flesh-like substance in the uterus nourishing the foetus, attached to the upper part of the uterus during gestation, and connected with the foetus by means of the umbilical cord.

PREGNANCY is the condition of a woman who is carrying a child.

PREMATURE LABOR is the interruption of pregnancy after the foetus is viable.

PRIMIPARA is a woman bringing forth her first child.

PROLAPSE means to fall forward; a falling down.

PUBERTY means to mature; the age of capability of re-production.

# LECTURES OF INTEREST TO WOMEN

PUTREFACTION means decomposition of animal or vegetable matter.

PUERPERAL is pertaining to child bearing.

PYLORUS is the inferior orifice of the stomach, communicating with the duodenum.

#### Q

QUICKENING is the period of gestation, about the seventeenth week, marked by the first perceptible movement of the foetus in the utero.

#### R

REGURGITATE. The vomiting of food without any effort.

#### S

SALINE is the nature of, or containing, salt.

SCROTUM. The pouch containing the testicles.

STASIS is a stagnation of the blood.

STERILE is to make free from germs.

SUPPOSITORY is a small mass of conical shape whose basis is usually cocoa butter, gelatin or glycerine. It is intended to convey medicine to act mechanically for either local action or constitutional results.

SUPPURATION is the process by which pus is formed or secreted. One of the terminations of inflammation.

SUTURE. To stitch together the edges of a wound.

#### $\mathbf{T}$

TOXEMIA is blood-poisoning.

TOXIC. Poisonous.

TRAUMA. A wound or injury.

#### U

UMBILICAL CORD is the naval string, which joins the foetus and placenta.

URETHA is a membrane canal conveying urine from the bladder to the surface.

URINALYSIS is the chemical analysis of urine.
UTERUS is the womb.

 $\mathbf{V}$ 

VENOUS STASIS means stagnation of blood in the veins.

VESICLE is the small sac or blister that forms on the body in eruptive diseases.



# SEATTLE MATERNITY HOSPITAL

This Institution will be the most modern Maternity Hospital in America. Equipped with all the latest appliances known to the medical profession for the successful treatment of confinement cases, including Nitrous Oxid-Oxygen apparatus, Infants Incubators, Lung Motor, X-ray and all other necessary equipment.

With a bed capacity sufficient to accommodate 200 patients per month, sleeping porches, sun parlors and six delivery rooms with one operating room.

The Hospital will be non-sectarian, open to the Medical profession, and operated on scientific, professional, ethical and business methods.



OUR NEW PROSPECTIVE HOSPITAL BUILDING

Each department will be in charge of trained nurses and superintendents, who have had years of successful experience in maternity hospital work.

There will be many new features in the nursery and delivery rooms in connection with our institution that you do not find in the general hospital.

#### CORRESPONDENCE SCHOOL FOR NURSES

The purpose of this school will be to give the young woman a thorough training for professional nursing, and to train the mother in nursing for the home. These courses can be studied in the evenings and in spare time, and will not interfere with the present employment of the student, thereby enabling her to pay her way while taking the course.

Students who wish may take a post graduate course in practical work in the Hospital.

#### FOOD AND DIET

An expert on Dietetics will have charge of this department. The latest modern warming ovens will be installed so that the patients' meals will be served hot.

#### POST GRADUATE COURSE

This department will be for physicians and graduate nurses who wish to specialize in maternity work. All late scientific methods will be demonstrated.

#### RATES

The moderate rate charged for this high-class service will bring it within reach of those heretofore mnable to receive hospital service in maternity cass.

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	Paragraph	Page		Paragraph	Page
			BARLEY WATER	1001	426
ABDOMEN, Pains in	68	37			
ABORTION	975	407	BABY, How to Lift		287
			Cry		111
Nursing Treatment		407	BANDAGE	80	40
Miscarriage	976	408	BASINS, In Sick Room		51
ABORTUSSIS		441	BASKET, For Baby		109
ABBREVIATIONS MEDICAL TERMS	1065				
		455	Contents of		285
ACCIDENTS	909	359	BATHS, During Pregnancy	44	28
Splinters	909	359	In Colic	436	168
			In Influenza		229
Cuts and Bruises		359	In Rickets		252
ACETIC ACID	884	348			
ADENOIDS	645	247	ln Scarlet Fever	~ ~ ~	234
		248	In Measles	538	205
When appear			Infants	304	12I
Symptoms		248	Premature Infants	461	177
Nursing Treatment	. 650	248	Sitz		39
AFTER-BIRTH		75			25.4
		74	Salt		
AFTER-CARE, asphyxia			Cold	. 785	309
Confinement	. 182	77	Temperature of	. 786	310
AFTER-PAINS	. 227	95	Should not be Given	. 787	310
AGARICIN		434	Mustard		311
				0.00	355
ALCOHOL, disinfectant		53	ln Eczema		
Poisoning	875	346	BED, Baby's		124
		276	BED SORES	. 499	193
ALBUMIN WATER			BED WETTING	. 814	320
ANAESTHETIC		70	BEEF, Scraped		260
ANALYSIS OF MILK	371	141			266
ANODYNE FOR INFANTS		435	Juice		
			BEETS, Boiled		270
ANTI-CONSTIPATION		438	BICHLORIDE	. 108	51
ANTIPYRIN	. 1042	443	BICARBONATE OF SODA	. 998	425
ANTIDOTES FOR POISON	871	345	BICARBONATE OF POTASSIUM	999	425
			BICHLORIDE OF MERCURY		346
ANTISEPSIS, Meaning of		46			334
APPLICATIONS, hot in croup	. 634	244	BIRTH MARKS		
APPLE SAUCE	694	266	BITES, Snake	. 834	328
APPETITE, loss of		289	Cat, Dog and Horse	. 835	329
			Mosquito		330
Treatment		290	Insect Stings		330
APPLICATORS, how to make	122	56			15
ARM FRACTURE	912	361	BLADDER, Irritability of		
ARSENIC POISONING		346	Paralysis of		89
			Relieving	. 209	89
ARTIFICIAL FEEDING		142	Catheterizing		89
After first month	379	145	Solutions used		90
After third month		145	BLOOD POISON		344
		146			
Amount required			BLOOD, Pressure of	. 36	26
Calories required		145	Toxemia	. 37	26
Change of diet	393	152	Eclampsia	. 38	27
Constituation		163	Rise, Cause of	. 39	27
			Testing		27
Details of giving		144	Change	. 250	106
Dextrimaltose		147	Change in		231
Explanation of	383	146	In Typhoid Fever		
Formulas from birth		148	BLUE SPELLS, Cause of	. 472	181
Formula No. 1		148	BOILS	. 860	340
			Treatment	0.77	340
Formula No. 2 to 7	388	149	BOTTLES, Care of		159
Formula, Holt's	389	150			440
Formula No. 1 to 6	390	150	BORACIC ACID		
			BOWELS, During Pregnancy		24
Formula, to Increase	392	152	Care of	. 206	88
Milk Mixture	373	142	During Fever	< -	234
Substitute for		143	How to Move		160
					87
How to give		143	Lying-in Period		
Substitute for Breast	376	143	Massaging		164
Quantity Required		144	Regularity of	411	159
Mixing Fresh Milk		154	BOW-LEGS	920	364
			BRAN POULTICE	796	314
Patent Foods		153	BREAD AND MILK POULTICE	795	314
Right Combinations	395	153			
Top Milk Mixtures		152	BREASTS, Inflammation of		351
		45	Treatment		351
ASEPSIS, Meaning of			During Pregnancy		15
ASPHYXIATION FROM GAS	959	392	Caked		85
ASPHYXIATED CHILD	162	72	Engorged		83
		72	Engorged		91
Oxygen			Diet for		
Treatment		72	Massage of	197	84
Routine of	165	72	Treatment for	198	84
Lung Motor		74	BREAST MILK	200	85
After care	171	74	BRAIN	478	186

**				Paragraph	Page
В	D	n	CONFINEMENT, After-Care	132	7
DDANCHITIC	Paragraph 613	Page 236	Temperature of Room		9.
Symptonis		237	Daily Care		92
Pulse		237	Visitors		9.
Nursing Treatment		237	After-pains		95 95
Temperature		238	When to Leave Bed Position of Patient		96
Plasters		238	CONSTIPATION—	447	70
Nourishment		239	During Pregnancy	29	2-
Digestion		239	Treatment		2
BROTHS, Veal		264	Diet		2
Chicken		$\begin{array}{c} 265 \\ 267 \end{array}$	Injections	32	2-
BRUISES		359	In Artificial Feeding	394	153
BURNS		331	In Children		376
Preparations to Use		331	Treatment	0.11	377
Topulation to Coo			Drugs		$\frac{377}{378}$
$\mathbf{C}$			Diet Exercise		380
CALCIDIN	. 1014	434	Older Children		380
CALOMEL WITH AROMATICS	. 1029	439	CONVULSIONS		245
CALORIES	. 381	145	Cause		245
CAMPHORATED OIL		442	Fatalities	640	246
CARMINZYM		449	Nursing		246
CARBOLIC ACID	. 873 712	$\frac{346}{270}$	Enemas		216
CARROTS, Boiled		140	Diet		247
CASEIN, In Milk		329	CORD, Tying of		71
CATNIP TEA		268	Dressing of		$-108 \\ -115$
CATHETERIZING, Infant		121	Premature Infant		$\frac{115}{178}$
CAUSTICS		346	CORSETS, During Pregnancy		22
CAYENNE-PEPPER PLASTER	803	315	COTTON JACKET	804	315
CHICKEN-POX	562	215	CORROSIVE SUBLIMATE	872	346
Nursing	563	216	COW'S MILK	398	155
Infection of		216	CRAMPS, Muscular	839	330
CHILBLAINS		349 350	CREAM	1004	426
Treatment		326	CREEP AND WALK	746	287
CHOLERA INFANTUM	928	369	CRIB, Kind of		124
Treatment	0.00	369	CROUPSymptoms		$\frac{242}{242}$
CHOLERA MORBUS		370	Cause of		242
Treatment	0.0 7	371	Dangers of	630	243
CIRCUMCISION		382	Pulse	631	243
CITRATE OF SODA		426	Nursing Treatment	632	243
CLOTHES, Long		286	Applications	634	244
ShortTime for Changing	742 743	$\frac{286}{287}$	Medical Treatment		2.14
CLUB-FOOT		363	Clothing		245
CODINE SULPHATE		447	CRY. Baby's	267	$\frac{111}{112}$
COD LIVER OIL	1027	438	Attention Benefit of	273 268	1112
COITUS, During Pregnancy	43	28	Cause of		111
COLD TABLETS	1019	435	Clothing	281	114
COLD COMPRESS		311	Exhausted		114
COLDS IN THE HEAD		351	Frightened		113
Treatment	400	351	Hungry		112
Symptoms of		$\frac{165}{166}$	Pain, When in		112
Treatment for		167	Position, Change of		143 113
Changing Position		168	Sleepy Temper		113
Colic Cures		167	Thirsty		112
Enema for	427	166	Treatment of	274	113
Feeding, in		168	Wet Napkin	276	113
Hot Bath		168	CURVATURE OF THE SPINE	923	365
Infant Anodyne		168	CUTS AND BRUISES		359
Recurring Spice Plaster		$\frac{168}{167}$	CUSTARDS, Plain		261
Stools, Green		166	Chocolate		261
White Curds		166	Baked	680	261
COLLAR BONE FRACTURE		361			
COLON IRRIGATION IN INFANTS.			D		
When Given		316			
Solution Used		316	DANDRUFF		3 41
Cold Solution		317	DEFORMITIES		363
How to Give		317	Club-foot		363
Older Children Position of Infant		317 317	Flat Foot		364 364
Murphy Drop Method		318	Pigeon-toe Bow-legs		364
CONCEPTION	89	43	Knock-knee		361

D			$\mathbf{E}$	Paragraph	Page
	Paragraph	Page	EARS AND NOSE		116
Hip-joint Disease	922	365	Foreign Bodies In		305
Curvature of the Spine		365	EARACHE		337
Of Nipples		33	Treatment		337
DELIVERY, Emergency	160	71	ECLAMPSIA	38	27
DEXTRIMALTOSE		147	ECZEMA, In Women	77	39
DIAGNOSIS, Of Pregnancy		19	In Children		354
Labor		63	Treatment	901	355
Scarlet Fever	529		Bath to Give		355
		203	Diet	903	355
DIAPER, Square		324	Urine	904	356
DIARRHEA		169	Drugs		356
DIET, During Pregnancy	27	23	EGGS, Soft Boiled		269
Bronchitis		239	Poached		269
Care of	216	91	Coddled		270
Convulsions	643	247	ln Milk		271
Dinner	220	92	ELBOW CUFF, Thumb Sucking		325
Breakfast		92	Nail Biting		326
Eczema	903	355	ELBOW FRACTURE		361
Engorged Breasts		91	ELECTRIC SHOCK		390
Incorrect	752	289	ELIXIR OF IRON	1050	448
Liquids		90	ELIXIR PEPSOLAXATONE		449 449
Lunch		92	ELIXIR LACTOPEPTONE		389
Measles		206	EMOTIONAL INSANITY		68
Nursing Mother	358	137	ENEMAS, During Pregnancy For Infants		164
Premature Infant		175	In Colic		166
Pneumonia		223	Different Kinds of		319
Rickets		251	EPILEPSY		386
Scarlet Fever		201	Treatment	0 = 4	386
School		282	EPISIOTOMY		77
Smallpox		220	ERGOT, When to Give		76
Wine, Value of	214	91	ERYSIPELAS		384
Whooping Cough	548	208	Treatment	0 84 8	385
1 to 10 years		255	ESSENCE OF PEPSIN		4.19
12 to 15 months		256 256	ETHER DURING LABOR	. 155	69
15 to 18 months		257	EXAMINATION, Pregnancy	21	20
· ·			Of Infants		107
DIETETICS		195	During Labor		65
DIET KITCHEN		197	By Nurse	135	62
DILATATION		65	EXERCISE		27
DIPHTHER1A	552	209	During Pregnancy		34
Contagious		210	Gymnasium		427
Fever in		213	EYES, Infants		107
Infection of		210	Care of		116
Membrane, Growth of		211	Premature Infants		178 282
Nursing Treatment		211	Eye Strain		304
DISEASES OF CHILDREN		185	Foreign Bodies in	11%	304
Of Premature Infants	469	180	$\mathbf{F}$		
DISINFECTION	511	197	FAINTING	70	37
DISLOCATIONS	915	363	FARINA MILK GRUEL		263
DISPOSITION, Change in		15	FEAR	728	280
DOG BITES		329	FEEDING BABY	321	127
DON'TS		284	Artificial	373	142
DOSIMETRIC TRINITY		439	After First Month	379	145
DOVER'S POWDER		443	After Third Month	380	145
DOUCHES		39	Amount Required	382	146
**	2007	451	Calories Required		145
Vaginal Cleansing		451	Change of Diet		152
		22	Constipation		153
DRESS, During Pregnancy	4 - 4	174	Details of Giving		144
Premature Infants			Dextrimaltose		147
DRESSINGS		50	Explanation of		146
DRESSING THE BABY	282	114	Formulas from Birth	0.0 =	148
When to		114	Formula No. 1		$\frac{148}{149}$
DR. DAVIS, Quotation from	236	98	Formula No. 2 to 7		150
DROWNING		395	Formula, Holt's	0.00	150
DRUGS TO MODIFY COW'S MILK		425	Formula No. 1 to 6	0.410	$\frac{130}{142}$
Lime Water		425	Milk Mixture Patent Foods	0.06	153
Sacchrated Solution		425	Top Milk Mixtures		152
Bicarbonate of Soda	1.1.1	425	Hygiene of	755	292
Bicarbonate of Potassium		425	Care of Utensils		292
DRUGS NOT USED		93	Cause of Infection		293
Not Safe	0.40	101	Rectal =		293

F				Paragraph	Page
*	Paragraph	Page	HEAD, Normal Size	829	326
DIGUET D			HEADACHE		336
FIGURE, During Pregnancy		33	HEALTHY INFANT	735	282
Abdominal Muscles		33	Normal Condition		283
Development		34 34	Weight, Increase in	737	283
Exercise		34	Fontanel		283
Massage Support		34	HEART-BURN		38
FINGERNAILS, Biting	. 827	326	HEAT UNITS OR CALORIES		418
Treatment		326	Caloric Value of Foods		418
Hand-I-Hold Mits		326	HEGAR'S SIGN, Of Pregnancy		17 448
Elbow Cuff	828	326	HEMABOLOIDSHEMORRHAGE		76
FISH AND OYSTER POISONING		347	HERNIA		373
FLAXSEED POULTICE		313	Umbilical		374
FLAT FOOT	918	364	Ventral		375
FLY PAPER POISONING.		346	HICCOUGH		324
FOOD, Absorption of	331	I30	HIGH CHAIR, When to Use		287
Kinds of		I31	HIVES		353
Artificial		139	Nursing Treatment		353
Weaning, Used in		171	HOLDING THE BREATH		322
Stale	507	196	HOLT'S FORMULA, Milk		150
FOREIGN BODIES IN EYE	774	304	HOME TRAINING	723	278
In Ear and Nose		$\begin{array}{c} 305 \\ 306 \end{array}$	HOME STERILIZING		49
Swallowing			HOP POULTICE		3I4 329
FORMALDEHYDE	. 974	405	HORSE BITESHOSPITAL, Necessity of		98
FORMULAS, From Birth		148 148	HOT BATH, In Colic		I68
Number 1 Number 2 to 7		149	HOT COMPRESS		311
Holt's I to 6		150	HUNGRY CHILD	270	112
FRACTURES		360	HYGIENE OF PREGNANCY	23	21
Lower Jaw		361	HYGIENE OF FEEDING		292
Collar Bone	911	361	HYDROCHLORIC ACID		348
Long Bones of the Arm		361			
Elbow	. 912	361	I		
Arm Below Elbow		361	TOP DAC	502	194
Ribs	. 912	361	ICE-BAG ICE PACK		312
Leg Above Knee		362	IMPETIGO		373
Leg Below Knee		362	IMPERIAL GRANUM		268
Splints		$\begin{array}{c} 362 \\ 333 \end{array}$	IMPRESSIONS, Maternal	46	30
FRECKLES FRESH A1R, Scarlet Fever	. 845 . 523	201	Nervousness		30
In Whooping Cough		201	Emotional	48	31
Hours for		126	Heredity	49	31
FROST BITES		349	INCORRECT DIET		289
Treatment		349	INCONTINENCE OF URINE	814	320
FUMIGATION	974	405	Causes of		320
			TreatmentINCONTINENCE TABLET		$\begin{array}{r} 321 \\ 439 \end{array}$
(3			INCONTINENCE TABLET INCREASE WEIGHT		459 118
$\mathbf{G}$			Milk Flow, How to		134
GAS ASPHYXIATION		392	Total Amount		136
GAS, In Sick Child		187	Total Solids		136
In Stomach		133	Fat	354	<b>I36</b>
Eliminant		449	Proteids	356	136
GAUZE SPONGES		56	INCUBATOR		I74
GELATIN, Orange		272 273	INCUBATION, Period of	611	236
Prune GERMS, In After-care		80	INDIGESTION	1053	448
GLOSSARY		457	INFANTS, Care of		105
GLOVES, To Sterilize		49	Blood Cord		$\begin{array}{c} 106 \\ 108 \end{array}$
Dry Sterilization	. 102	49	Examination of	253	107
GRADUATE, GLASS	. 494	192	Eyes, Care of		107
GREEN PEA SOUP	. 692	265	First Care		106
GRINDING TEETH		189	General Condition	257	108
GRUEL	. 711	270	Shock	248	105
FARINA MILK		263	Uterine Contraction	249	105
GUMS, Sore	. 67	37	Length of	747	288
GUM BOILS	. 773	303	INFANT ANODYNE	435	168
GYMNASIUM EXERCISE	. 1006	427	INFANTILE PARALYSIS	955	387
			Treatment	956	388
· H			INFECTION, In PregnancyIn Diphtheria		$\frac{46}{210}$
HAND-1-HOLD MITS			ln Chicken-pox		210
For Sucking Thumb	. 826	325	Blood Poisoning	869	344
For Biting Nails	. 828	326	INFLAMMATION, Of Eyes	892	350
HANDS, Swelling of	. 78	40	Of Infants' Breasts	893	351
HARE-LIP	. 848	335	Treatment		351

I	Paragraph	Page	M		
INFLUENZA	590	226		Paragraph	Page
Baths	597	229	MALARIA	. 932	371
Cause of	590	226	Nursing Treatment	. 933	371
Complications	593	227	MALTED MILK	. 704	268
Feeding, Danger of	595	228	MASSAGE	. 42	28
Cotton Jacket	596	229	Bowels	. 422	164
Infants' Treatment	598	229	Engorged Breast	. 197	84
Medical Treatment INSECT STINGS	599	$\frac{229}{330}$	MASTURBATION	. 947	382
1NSOMNIA, During Pregnancy	838 64	36	Treatment	. 948	383
In Children	906	357	MASTICATION OF FOOD	. 509	197
INJECTIONS		24	MEALS, Morning Noon	. 671 . 672	$\frac{258}{259}$
INTESTINAL TRACT	411	159	Evening	. 673	259
INTESTINAL ANTISEPTIC	1038	441	MEASLES	. 530	203
INTESTINAL WORMS	863	341	Cause of	531	203
Round Worms	864	342	Signs	. 532	204
Pinworms		343	Temperature	. 533	201
Tapeworm	866	343	Rash	. 534	204
Treatment	867	344	Complications	. 535	205
INSTRUMENTS, Sterile		50 57	Nursing of	. 536	205
In Pregnancy	885	348	Light and Air	. 537	205
IPECAC		444	Baths Diet	. 538	$\begin{array}{r} 205 \\ 206 \end{array}$
ITCHING SKIN		39	MEASURES, Table of	. 539 . 989	419
ITCH	858	340	MEDICINE CABINET AT HOME	. 1012	432
Treatment		340	MEDICINE, Correct Dose	. 832	327
			Average Dose	. 833	328
J	0.0.4	0.1.5	How to Give	. 491	190
JACKET, Cotton	804	315	Kinds of	. 492	191
In Influenza	596 911	229	MEDICAL TREATMENT AT HOME	. 1013	434
JUICES OF STOMACH	329	$\begin{array}{c} 361 \\ 129 \end{array}$	MENINGITIS	. 966	399
JUNKET	698	267	Nursing Treatment	. 967	400
		-0.	Drug Treatment	. 968	400
K			MENOPAUSE	. 982	415
KASAGRA	1018	435	Nutsing TreatmentMENSTRUATION	. 983 . 2	$\begin{array}{c} 416 \\ 12 \end{array}$
KIDNEYS, In Pregnancy	35	25	Cessation of		13
In Infants	302 528	$\begin{array}{c} 121 \\ 202 \end{array}$	May Continue	4.	13
KNOCK-KNEE		364	lrregular	. 5	13
KIVO(IK-K: (17)	/21	904	Meaning of	. 978	411
$\mathbf{L}$			Painful	. 980	-412
LABOR, Normal Case of		62	Treatment	. 981	413
Anaesthetic		70	Drug Treatment	. 981	414
Beginning of		61	MENTAL WORK for Children MENTHOL COMPOUND	. 732	281
Diagnosis of Dilatation		63 65	MILK SUGAR '	. 1021 . 1003	$-\frac{436}{426}$
Different Stages		66	MILK, Breast—	. 1003	440
Ether		69	Drying Up	. 200	85
Examination		65	Flowing of	201	85
Meaning of		62	Abnormal	. 202	86
Missed	88	43	Lack of	. 203	87
Mechanical Device		68	Premature Infant	. 451	173
Nitrous Oxide		70	Cow's, Analysis of	. 371	141
Responsibility of		63	Cleanliness of	. 364	139
LANDANIM POISONING		267	Composition of		141
LEAD POISONING		$\frac{347}{347}$	Casein in Reaction of	. 368	140
LEG FRACTURE	913	362	Selection of	. 370 . 363	$\begin{array}{c} 141 \\ 139 \end{array}$
LEUCORRHEA IN CHILDREN		384	Packed in 1ce	. 365	139
Treatment		384	Preservations		140
LICE		339	Sugar and Fat	369	140
Treatment		339	Mixing		154
LIFTING BABY, How to	745	287	Boiling	. 398	155
LIME WATER		266	Modification of		155
LIQUID ALBOLENE		440	Pasteurization of	. 401	156
LIQUID DIET	213	90	Sterilization of	. 402	156
In Pneumonia		$\frac{224}{129}$	Home Pasteurization Digestibility		157
LIVER, Functions ofLUNCH		92	Selection of		158 158
LUNGS, Premature Infant		181	MILK MIXTURE		142
LUNG MOTOR		74	Substitute for	374	142
LOCHIA	187	80	How to Give	375	143
LOSS IN WEIGHT	294	118	Quantity Required	377	144
LYE POISONING	874	346	Details of Giving	378	144
LYSOL	109	52	MILK OF MAGNESIA	424	165
Use of	179	77	Home Cabinet	1039	442

78.80				Paragraph	Page
M	Paragraph	Page	Position for	343	134
MICDAINE			Flow of Milk	344	134
MIGRAINE		438 408	Increase Flow	345	134
MODIFYING BREAST MILK		136	Amount Secreted		134 135
Increase Amount		136	Over-feeding		135
Decrease Aniount		136	Contents ofSick Children		189
Increase Solids	352	136	Successful		288
Decrease Solids		136	Unsuccessful		288
Increase Fat		136	NUTMEG PLASTER	802	315
Decrease Fat	355	136	O		
Decrease Proteids	356 357	$\frac{136}{137}$		(75	9.60
MORPHINE POISONING	881	347	OATMEAL WATEROBEDIENCE IN CHILDREN		$\frac{260}{279}$
MOSQUITO BITES	837	330	OCCUPATION, Mental		29
MORTALITY, In Scarlet Fever	518	199	OPERATION, Cost of		101
In Smallpox	568	218	OPIUM POISONING	881	347
MOTHER AND BABY	259	109	ORANGEADE	701	268
MOUTH BREATHING		323 178	ORANGE GELATIN		272
MOUTH, Premature Infant In Sick Child	464 480	186	OXYGEN	163	72
Cleaning of		197	P		
MORNING SICKNESS	6	14	PAINFUL MENSTRUATION	980	412
When it Occurs		395	PAINLESS CHILDBIRTH		96
Treatment		35	Accidents (Dr. Davis)		100
Drugs Used	63	35	Arguments in Favor of		101
MUMPS		213	Cash, Necessity of		102
Nursing MURPHY DROP METHOD	561	214	Cost of		101
MUSHROOM POISONING		318 347	Drugs not Safe		101
MUSTARD BATH		311	Dr. Davis' Quotation		98
MUSTARD PLASTER	792	313	Education Husband's Endurance		99 99
		0 2 0	Living and Dress		97
X			Meaning of		96
NAILS, Care of	289	116	Methods Used		101
Biting		326	Operation, Cost of		101
NAPKIN (Diaper)		109	Physician's Duty		97
Size of	261	109	Reasons of		98
How Applied	262	110	Specialist, Necessity of		$\frac{100}{97}$
Disposition of		110	Suffering, DuringPASTEURIZATION	231 401	156
Washing of		$\begin{array}{c} 110 \\ 110 \end{array}$	PAREGORIC	1047	446
Dispensing with		110	PATENT FOODS	396	153
Square		324	PEPTONIZED MILK	674	260
NAVŶ BEANS	685	262	PEPTENZYME	1055	449
NEIGHBOR, A WORD TO		431	PERINEUM, Care of		74
NERVOUSNESS		30	In After-carePHENACETINE		79 445
NIGHT TERRORS		336	PHOSPHORUS		437
TreatmentNITRIC ACID POISONING		$\begin{array}{c} 336 \\ 348 \end{array}$	PINWORMS		343
NITRO-MURIATIC ACID		348	PIGEON-TOE		364
NIPPLES, Breast		31	PITTING, In Smallpox	577	220
Care of		31	PLASTERS		315
Treatment		32	Spice Plaster	800	315
Tender		32	Pepper Plaster Nutmeg Plaster	801 802	$\frac{315}{315}$
Deformities		33 81	Cayenne-Pepper Plaster		315
Bottle		158	Mustard Plaster		313
Best to Use		158	PNEUMONIA		221
Care of		158	Parts Affected	579	221
Opening of	409	159	Symptoms		222
NITROUS OXIDE		70	Pulse		222
NUMBNESS		36	Nursing Treatment Nourishment		223 223
NOSE AND EARS, Premature Foreign Bodies in		$\frac{178}{305}$	Feeding, How to		223
NOSE-BLEED		332	Liquids		224
NOURISHMENT, Sick Child		192	Room, Care of		224
NURSES' GRIP, Contents of	127	59	Temperature	588	225
NURSING INFANTS	194	82	Reduction of	589	225
Care Before	284	115	POISON AND ANTIDOTES		345
Time for		131	Corrosive Sublimate		316
Effect of		131	Bichlordie of Mercury		316
First Three Days		132 132	Carbolic Acid		346
Hours for		133	Alcohol		346
Giving Water		133	Fly Paper		346
Cleanliness		133	Paris Green		346

13				Paragraph	Page
P	D . I	7)	Signs and Symptoms of		11
	Paragraph	Page	Signs, Positive	22	20
Arsenie		346	Skin Eruption	. 73	38
Rat Poison		3.16	Swelling, Hands and Feet		40
Fish, Oysters		347	Table, Calculating		42
Ptomaines		347	Explanation of		42
Silver Nitrate		$\frac{347}{347}$	Toothache	. 66	36
Strychnine			Urinating	. 71	38
Tobacco		$\begin{array}{c} 347 \\ 347 \end{array}$	Uterus, Change in		17 18
Opium		347	Form		18
Landanum		347	Size		19
Mushrooms		347	Position of		19
Lead Poisoning		347	Vagina, Discoloration of		16
Acetic Acid		348	Softening of		16
Hydrochloric Acid		348	Varicose Veins	. 79	40
Nitric Acid		348	PREPARATION OF ROOM—	,	10
Nitro-muriatic Acid	884	348	Antisepsis	. 95	46
Sulphuric Acid		348	Applicators		56
Iodine		348	Articles Needed		55
POISON OAK AND IVY		348	Asepsis, Meaning of		45
Treatment		349	Caution		54
POTASSIUM CHLORATE		437	Dish for Ligatures		53
POULTICES		313	Emergency Case		58
Flaxseed		313	Forward		45
Slippery Elm		314	Infection		46
Bread and Milk		314	Instruments	2 2 4	57
Bran		314	Newspapers	. 123	56
Нор	797	314	Nurse's Grip	. 127	59
Starch	-00	314	Physician's Grip	. 126	59
POTATO SOUP	688	263	Room, Delivery	. 116	55
PREGNANCY—			Bed		55
Abdomen, Pains in	68	37	Selection of		68
Bathing During		28	Septic		45
Bath, Sitz		39	Solutions, Bichloride		51
Blood Pressure	36	26	Lysol		52
Bowels	28	24	Ziratol		52
Breast	10	15	Water, Hot and Cold		52
Coitus, During		28	Alcohol		53
Conception		43	Sterile		46
Consideration of		19	Sterilize, How to		47
Constipation		24	Routine of		47 48
Date, Fixing		42	First Duty Precaution of		48
Days, Number of		41	Gloves, Wet		49
Diagnosis		19	Gloves, Dry		49
Diet During		$\begin{array}{c} 23 \\ 15 \end{array}$	At Home		49
Disposition, Change in		$\frac{13}{34}$	Dressings		50
Disturbances of		39	- Instruments		50
Douches	0.0	25	Basins Needed		51
Examination, Chemical	2.3	20	Supplies		56
Exercise	4.3	27	Sponges, Cotton		56
Fainting	M 0	37	Gauze		56
Figure, During		33	PREPARATION OF PATIENT	129	60
Gums, Sore	/ M	37	Arrival	130	60
Heart-burn	70	38	First Duty	131	60
Hegar's Sign		17	During Labor	132	61
Hygiene of		21	Immediate Use for	133	61
Dress		22	Examination by Nurse		62
Shoes	0.0	22	Enema, Extra		68
Corsets	26	22	Drape Patient, How to	1009	431
Impressions During	46	30	PREMATURE INFANTS—	167	
Insomnia During		36	Bath for		177
Kidneys		25	Blue Spells		181
Length of		40	Choking		181
Massage		28	Cord	450	178
Menstruation	0.0	12	Cry		$\frac{173}{179}$
Missed Labor	0.0	43	Daily Care		175
Months		41	Diet, Correct		180
Morning Sickness		14 35	Diseases of		174
When Occur		35	Eyes, Care of		178
Treatment	60	35	Feeding, Method of	458	176
Drugs Used	F.0	31	Forced Feeding		177
Nipples		36	Genitalia		178
Numbness Occupation, Mental		29	Incubator		174
Quickening, Meaning of		41	Lungs		181
Quieronning, mouning or					

P			S	
•	Paragraph	Page	OA GOLD ABUD GOLDBION	Paragraph Pag
Meaning of	449	173	SACCHRATED SOLUTION	
Mother's Milk, Must Have		173	SAGE TEASALINE LAXATIVE	
Mouth		178	SALITHIA	10.00 45
Nose and Ears		178	SANTONIN AND CALOMEL	
Nursing		172	SAUCE, Cream	714 27
Over-feeding		177 174	SCALP, Care of	290 11
Room, Care of	$\begin{array}{c} 453 \\ 462 \end{array}$	178	SCARLET FEVER	
Thrush	471	180	Dangers of	
Weight		175	Germs	# T # T A
Weighing of		176	Contagion Time of Year	
PRICKLY HEAT	. 291	117	Ages Affected	
PROLAPSE OF BOWELS		416	Mortality	
Nursing Treatment		$\frac{417}{265}$	Comparison	
PRUNES, Stewed	- 10	272	Rash	
Gelatin		273	Complications	
PUBERTY		409	Nursing Fresh Air	
PUDDINGS		262	Diet	# a
Sago	681	262	Bed	= 0 = 0 0 o
Cornstarch		262	Kidneys, Care of	528 203
PULSE RATE, Normal Infant		$\begin{array}{c} 262 \\ 123 \end{array}$	SCHOOL LIFE OF CHILDREN	
In After-Care		78	SCRAPED Beef	
Infants	4 45 44	188	SCURVY	
Pneumonia		222	Cause of	
Bronchitis		237	Symptoms of	
Croup		243	Diet in	
Normal		326	Bath, Salt	
PUNISHMENT FOR CHILDREN	726	279	SEXUAL LIFE	1010 432
			SEX CONTROL	
Q			SHOES, During Pregnancy	
QUICKENING, Meaning of	. 84	41	S1CK CHILDBed-Sores, Cause of	
QUININE		445	Brain	
COUNTY I	· IOFI	110	Breathing	
R			Cleanliness	501 194
			Colon_Flushing	
RAT POISON		346	Diet Kitchen	
RASH, In Measles		$\frac{204}{217}$	Disinfection	
In SmallpoxIn Scarlet Fever		200	Facial Expression Feeding	
RECTAL FEEDING	756	293	Food, Quantity of	
Articles Required		293	Dietetics	505 195
How to Give	. 757	294	Preparation of	
Size Tube to Use	. 758	294	Stale	
Amount GivenIndications for		$\begin{array}{c} 295 \\ 295 \end{array}$	Gas	
Nourishment		296	Graduate, Kind ofGrinding Teeth	
RELATIVES, Education of		68	Ice-bag	502 19
REPAIR WORK	. 175	75	Mastication	
RESPIRATIONS		123	Medicine, How to Give	491 190
Number of		327	Kind of	
RHEUMATISM	. 924 . 925	366	Mouth	
Nursing Treatment Drugs		367 368	Cleanliness of	
Special Diet		368	Nourishment	494 192
RHEUMALGINE	. 1020	436	Nursing	488 189
RHEUMATIC		438	Position of Patient	508 196
RIBS, Fracture of	. 912	361	Pulse, Infants	485 188
RICE WATER	. 702	268	Skin, Color of	479 186
Symptoms of		249 249	Stools	
Constipation in		249	Sweating	
Bones Affected		250	Throat Examination	493 193
Resistance	. 655	250	Tongue	
Nursing Treatment		250	Urine, Color of	489 189
Diet		251	Warni Clothing	500 193
Bathing		$\frac{252}{339}$	Water	497 193
Treatment		339	SICK ROOM	971 403
ROOM FOR DELIVERY		55	Bedding, Linen. DishesFood	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Selection of		68	Discharges	973 40.
ROUND WORMS	861	3.12	Duties of Nurse	072 40

$\mathbf{s}$				Paragraph	Page
	aragraph	Page	Time Emptied	. 327	129
SIGNS AND SYMPTOMS OF PREG.	e	,	Hunger Appears	328	129
NANCY		11	Jnices of	329	129
SILVER NITRATE	878	347	STOOLS, Infant	. 342 . 413	133 161
SKIN, Eruption	73	38	Abnornial	414	161
Itching	74	39	Color of	416	162
Douches	69 75	37 39	Treatment for	417	162
Bath, Sitz	76	39	Large and Hard	. 420	163
Eczema	77	39	Green in Colic	428	166
Infants	255	108	White CurdsSTROPHANTHUS	. 429	166 440
Sick Child	479	186	STRYCHNINE	. 1032	440
SLEEP, During Pregnancy	222	93	Antidote for	. 879	347
Necessity of	223	94	ST. VITUS' DANCE	962	396
Infants	311 312	123 124	Treatment	. 963	397
Regularity	315	124	Diet	. 964	398
Disturbed	316	125	Fowler's Solution	. 965	398
Mouth Open	317	125	SUCKING THUMB	825	325
With Mother	318	126	SUGAR AND FAT IN MILK	. 826 . 369	325 140
Outdoors	319	126	SUNBURN		333
Hours of Airing	320	126	SULPHURIC ACID	. 884	348
SLIPPERY ELM POULTICESMALLPOX	794	314	SULPHUR FUMIGATION	971	405
Rash	566 567	217 217	SUGGESTIVE THERAPEUTICS	. 1007	428
Mortality in	568	218	SUPPLIES FOR PREGNANCY		56
Resistance of	569	218	SWELLING OF HANDS AND FEET		40
Transmittance of	570	218	Varicose Veins		40
Contagion	571	218	BandagesSWEETS SPIRITS OF NITRE	. 80 . 1046	40 446
Symptoms of	572	219	5 W EE 15 ST IRT 15 OF WITRE	. 1040	440
Complications	573	219	${f T}$		
Nursing Treatment	574	219	TABLE OF MEASURES	. 989	419
Diet Water	575 576	$\frac{220}{220}$	Food First Year		420
Pitting	577	220	Approximate Equivalent	991	420
SNAKE BÎTES	834	328	Drops		422
SODIUM BROMIDE	1049	447	Digestion	. 993	422
SOLUTIONS	986	417	Cooking Vegetables	. 994	424
Bichloride	108	51	Food per pound weight	. 995	424
Lysol	109	52	TABLE IN PREGNANCY	. 86	42
Ziratol	$\begin{array}{c} 110 \\ 111 \end{array}$	$\begin{array}{c} 52 \\ 52 \end{array}$	Explanation of	. 87 . 300	42 120
Alcohol	112	53	TAENICIDE	1062	453
SOMNOS	1036	441	TAPEWORM	. 866	343
SORE THROAT	897	352	TEETHING, Dentition	. 765	300
SOUPS, Navy Bean	685	262	Symptoms of	. 766	300
Veal and Vegetable	686	263	Appearance of		300
Potato Vegetable	688 689	263 264	Treatment Care of		$\frac{300}{301}$
Green Pea	692	265	Preparations for Cleaning	. 770	301
SPICE PLASTER	431	167	Clean, When to		302
How to Make	800	315	Examination of	. 770	302
SPLINTERS	909	359	Eruption of	. 771	302
SPLINTS	914	362	Table of Appearance	. 771	303
SPONGES, Cotton	120	56	Toothache	. 772	303
SQUASH	$\begin{array}{c} 121 \\ 717 \end{array}$	$\begin{array}{c} 56 \\ 272 \end{array}$	TEMPERATURE, In Laborln After Care		67 78
STARCH POULTICE	798	314	Baby's Bath	. 306	122
STAMMERING AND STUTTERING	969	401	Of Baby		123
Treatment	970	402	In Measles	. 533	204
STERILE, Meaning of	94	46	In Bronchitis	. 617	238
STERILIZE, How to	97	47	In Tonsillitis	. 624	240
Routine of	98	47	THERMOMETER	. 777	307
First DutyPrecaution of	$\frac{99}{100}$	48 48	How to Use	. 778 . 779	$\frac{307}{307}$
Gloves, Wet	101	49	Taking Temperature	. 778	307
Gloves, Dry	102	49	By Rectum		308
At Home	103	49	Time to Take	. 782	308
Dressings	104	50	Care of Instrument	. 783	309
Instruments	105	50	Temperature Curve		309
Basins Needed	107	51	THRUSH		180
Cow's Milk STOMACH, Amount Holds	$\begin{array}{c} 402 \\ 322 \end{array}$	$\begin{array}{c} 156 \\ 127 \end{array}$	THUMB SUCKINGTOAST WATER	. 825 . 707	325 269
Shape of	323	127	TOBACCO POISONING		347
Capacity of	324	127	TOMATOES, Stewed		271
Disturbances of	325	127	TONGUE, In Sick Child		189
Physiology of		128	TONGUE-TIE		334

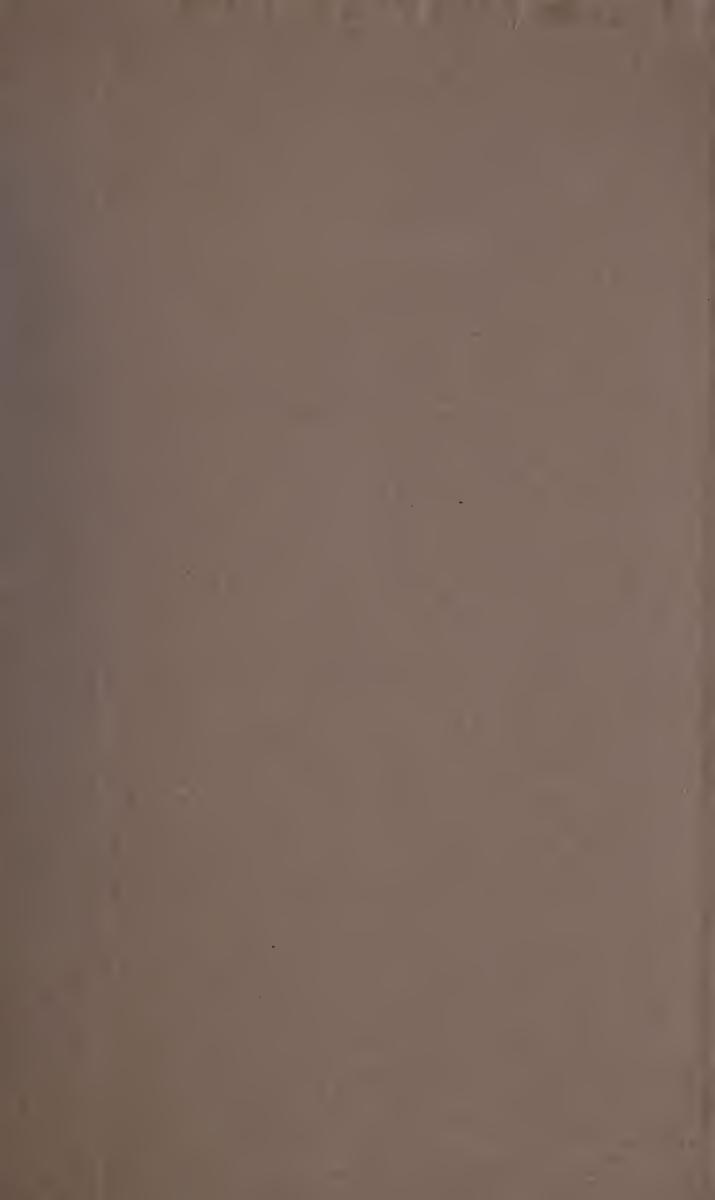
T			$\mathbf{V}$		
	Paragraph	Page	·	Paragraph	Page
TONSILLITIS	622	240	VAGINA, Discoloration of	11	16
Symptoms	623	240	Softening of		Ιć
Temperature	624	240	VAGINAL ANTISEPTIC POWDER	1061	450
Nursing	625	241	VARICOSE VEINS	79	40
Medical Treatment		241	VEAL AND VEGETABLE SOUP	686	263
Tablets	1023	437	VEAL BROTH	690	26
TOOTHACHE, In Pregnancy		36	VEGETABLE SOUP		26-
TOXEMIA		26	VENTRAL HERNIA		375
TRAINING OF INFANTS AND			VISITORS		94
CHILDREN—			VOMITING	907	357
When to Start	721	277	Nursing Treatment		358
When to Give Toys		277			
When to Have Playground	721	277	XAT		
Example	722	277	W		
Home Training	723	278	WARTS	843	332
Right from Wrong	724	278	WATER, In Constipation	30	24
Obedience	725	277	Hot and Cold	111	52
Punishment	726	27)	Use of		130
Unselfishness	727	279	Sick Child		193
Fear	728	280	Smallpox		220
Presenting to Visitors	729	280	WEANING		169
Talking Before Children	730	281	When to		170
School Life	731	281	Nine Months		170
Mental Work	732	281	Results	412	170
Eye Strain	733	282	Forced		170
Diet While at School.	734	282	Sickness, Cause of		170
TRIPLE ARSENIC WITH NUCLEIN	1052	448	Food Used		171
TRIPLE BROMIDES	1017	435	Formulas		171
TURPENTINE STUPE	820	322	Normal Time for		172
TYPHOID FEVER	600	230	WEIGHT, Infants		117
Cause of		230	Average of		118
Incubation	602	231	Loss in		118
Symptoms	603	231	Normal		119
Blood Examination	604	231	Gain Should be	297	119
Nursing Treatment	605	232	Record of		119
Diet	606	233	Chart Used	299	120
Bowels	607	234	Table of	300	120
Baths	608	234	Scales Used	. 301	120
Disinfectant	609	235	Premature Infants	456	175
Complications	610	235	Increase in		288
¥ Y			WET NURSE	359	137
$\mathbf{U}$			Qualifications for		138
UMBILICAL HERNIA		374	WETTING BED	. 814	320
UNSELFISHNESS IN CHILDREN	727	279	Causes of	815	320
UNSUCCESSFUL NURSING	750	288	Treatment		321
URINE	207	88	Incontinence Tablet	. 818	321
In Sick Child	489	189	WHEY	697	267
In Scarlet Fever	528	202	WHOOPING COUGH		206
Amount of		322	Symptoms of		206
Frequency		38	Development		206
UTENSILS		427	Cough		207
UTERINE TONIC	1060	450	Cause of		207
UTERINE SEDATIVE		449	Complications		207
UTERUS, Change in		17	Nursing Treatment		208
Form		18	Diet		203
Size	16	18	Nourishment		203
Consistency	17	19	Fresh Air	550	209
Position of		19	Medical Aid		209
Height of	185	79	WINE, Value of	214	91











0 033 261 379 0